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**ENVIRONMENTAL RADIOACTIVITY IN CANADA
1986**

**Environmental Health Directorate
Health Protection Branch**

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ABSTRACT

The radiological surveillance program of the Department of National Health and Welfare is conducted for the purpose of determining levels of environmental radioactivity in Canada and assessing the resulting population exposures. During 1986 the program was strongly influenced by radioactive fallout on Canada resulting from the Chernobyl nuclear reactor accident on April 26, 1986 in the Soviet Ukraine. The Environmental Radiation Hazards Division (ERHD) increased its frequency of analyses of environmental samples immediately following the accident. Interim screening limits for foodstuffs were developed. A measurement program for radioactivity in domestic and imported foods was implemented. The ERHD measurement program was supplemented by additional measurements conducted by many other private and government laboratories. Radiation doses to Canadians from Chernobyl fallout were extremely low with no group in the population receiving more than 10 microsieverts.

This report is prepared as a summary of work in progress and as a means of publishing the results of ongoing programs in a format that, it is hoped, is useful to those who receive it. Comments, suggestions and questions concerning this material are appreciated. Thanks are hereby extended to those who have taken the time to contact the Division and an invitation is extended to everyone to send their ideas to:

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INTRODUCTION

The Environmental Radiation Hazards Division of the Bureau of Radiation and Medical Devices (BRMD) investigates the potential health effects to the Canadian population from natural and man-made sources of environmental radioactivity.

During 1986 many of the studies were shaped by the April 26th Chernobyl nuclear reactor accident in the Soviet Ukraine and the impact of the resultant radioactive fallout on Canada. Immediately following the accident, the Environmental Radiation Hazards Division was placed on an emergency monitoring schedule with increased sampling frequency and analyses which are reflected in many additional data tables. Sampling frequency was reduced at the end of May but continued at higher than normal levels for the remainder of the year. The activities of the ERHD were supplemented through sampling and analyses by private and government laboratories across Canada (Table 1). The additional data generated by these laboratories is reported separately (Tables 10, 16, 24 and 26).

Interim screening limits for radioactivity in foodstuffs were developed. A measurement program for radioactivity in domestic and imported foods was implemented.

In this report the results for 1986 are presented in tabular form. Fallout trends for gross beta radioactivity in air and precipitation and cesium-137 and strontium-90 in processed milk from 1958 to 1986 are illustrated in graphical form (Figure 2).

Studies on the potential impact of radioactive emissions from nuclear reactors in Canada were maintained. Preoperational monitoring in the vicinity of Ontario Hydro's Darlington Nuclear Generating Station was initiated in February. Studies continued for radium-226 and uranium in drinking water supplies, and for case-control epidemiology of lung cancer and domestic exposure to radon. A passive radon dosimeter based on alpha detection in CR-39 plastic was developed.

In this report results are given in the SI system of units. Radioactivity measurements are in becquerels (Bq) where one becquerel is equivalent to 27 picocuries. Absorbed doses are in grays (Gy) where one gray is equal to 100 rads. Dose equivalents are in sieverts (Sv) where one sievert equals 100 rems.

IMPACT OF THE CHERNOBYL NUCLEAR REACTOR ACCIDENT

On April 26, 1986, an explosion and subsequent fire occurred at Unit #4 of the Chernobyl Nuclear Power Station 120 km north of Kiev in the Soviet Ukraine. The outside world became aware of this accident on the morning of April 28 when radioactivity was detected in Sweden at the Forsmark Nuclear Power Station. During the next 10 days between 2 and 8 percent of the total radioactive content of the reactor was released to the atmosphere.

Regional weather systems first transported this material to the northwest, covering much of Scandinavia. Winds shifted to easterly and north easterly, so that within a few days most of Europe had been affected by radioactive fallout. A small amount of this material was transported across the North Atlantic, reaching the high Arctic by May 2, and eastern Canada as early as May 6. In the meantime, a sizable quantity of material was lifted to higher altitudes and carried around the world by prevailing westerly winds. This material reached the west coast of Canada by May 7 and eventually spread throughout the entire country.

Monitoring Activities

The field sampling for air and precipitation involves a network of 28 stations operated in cooperation with the Atmospheric Environment Service (AES), Environment Canada at airports across Canada from Vancouver, British Columbia to St. John's, Newfoundland and north in the high Arctic at Resolute, Northwest Territories (Figure 1). Each station has a continuous high volume air sampler drawing air through a glass fibre filter at a flow rate of 900 cubic metres per day. Filters are normally changed weekly and returned to the Bureau of Radiation and Medical Devices laboratory for counting. In addition, each station has a precipitation collector for collection of wet and dry deposition. The collector is an open cylindrical container with a polyethylene liner. The liner and contents are normally returned monthly to the laboratory for analysis.

Within hours of the announcement by Sweden, the fallout monitoring network of the Department of National Health and Welfare was placed on "full alert". Air filters were removed every 24 hours and rushed to the BRMD laboratory by Air Express. Weather pattern prediction by the Atmospheric Environment Service, Environment Canada, provided daily information on the movement of weather systems potentially bearing radioactivity from the accident site to North America.

Following the Chernobyl accident, as air filters were received at the Bureau of Radiation and Medical Devices, they were grouped together according to 12 geographical regions (Table 2) and measured by gamma ray spectrometry using hyperpure germanium detectors. Initial gamma scans were employed to analyse for iodine-131 and other short-lived radionuclides. The fresh fission products, iodine-131 (Table 5), cesium-134 (Table 7), ruthenium-103 (Table 8) and tellurium-132 (Table 9) together with increased levels of cesium-137 (Table 6) were identified in fallout from the Chernobyl accident. Three days after sampling, the filters were individually measured for gross beta radioactivity (Tables 3 and 4). The delay allows short-lived natural radionuclides to decay.

During the Chernobyl crisis, three sites, Prince George, Revelstoke and Terrace, British Columbia were added to the precipitation monitoring network to provide expanded geographical coverage. Precipitation samples from all stations were returned every 24 hours if there had been measurable accumulation during that period. The samples were individually gamma scanned on hyperpure germanium detectors upon receipt and then composited into monthly samples for each station. Monthly composite samples were analysed for gross beta radioactivity (Table 11). The May and June composite samples were analysed by gamma spectrometry for individual gamma emitting radionuclides and radiochemically for strontium-89 and strontium-90 (Tables 12-15).

In July, the sampling frequency for air and precipitation samples returned to normal, i.e. weekly for air filters and monthly for precipitation.

The Department of National Health and Welfare also maintains a milk sampling network in 18 cities in southern Canada where a significant dairy industry exists. Processed milk from this network was sampled weekly from mid-May to the end of June. In addition, daily milk sampling was carried out in Ottawa and with the aid of provincial and private laboratories, in Vancouver, Edmonton, Fredericton and Halifax. Raw milk from a dairy herd near Ottawa was sampled and gamma scanned daily from May 9 till the end of June.

Milk samples received by BRMD were individually gamma scanned for determination of iodine-131 and cesium-137 (Tables 17 and 18). Monthly composite samples were prepared for each station and analysed by gamma spectrometry for cesium-137 and potassium-40 and by radiochemical procedures for strontium-89 and strontium-90 (Tables 19 and 20). Milk sampling was reduced to monthly sampling and analysis in July and will remain so until June 1987 (analysis is normally quarterly).

Monitoring Results

Radioactivity levels in air across Canada are shown in Tables 3 to 10. On May 8th, iodine-131 and other fresh fission products were first reported for air filter samples collected May 5-6 from Saskatchewan through to British Columbia and sent to BRMD for analysis. Subsequent receipt of air filters from the high Arctic, revealed that the earliest arrival of radioactivity from the Chernobyl accident was indicated by increased gross beta radioactivity of the May 2 sample from Resolute, Northwest Territories (Table 3). The level of 2.0 mBq m^{-3} for this sample is 2.5 times the normal background level. Also trace amounts of iodine-131 (Table 5) and cesium-137 (Table 6) were identified in the sample. By May 12th increased levels of radioactivity in air were widespread across Canada.

The highest radioactivity levels in air occurred around May 10-11 across Canada with the maximum gross beta radioactivity level of 78 mBq m^{-3} observed in Edmonton on May 11th (Table 3). The Calgary/Edmonton group of filters for this date exhibit the maximum concentrations for iodine-131 (22 mBq m^{-3}), cesium-137 (18 mBq m^{-3}), cesium-134 (9.9 mBq m^{-3}) and ruthenium-103 (12 mBq m^{-3}). These levels are 4 to 5 times higher than the average value across Canada during this period. A level of 31 mBq m^{-3} total iodine-131 (both filter and charcoal absorber) was observed at Digby, Nova Scotia (Table 10). Incomplete retention of iodine-131 by glass fibre filters is shown in the data of Table 10 where the filter is followed by a charcoal absorber. The glass fibre filter collection efficiency is in the range of 40-80% for iodine-131.

The identification of the radionuclide cesium-134 in fallout in the ratio of approximately 0.5 with cesium-137 identifies the fallout as originating from the Chernobyl accident as opposed to the reported venting of an underground nuclear weapons test held in Nevada, United States in April 1986. Cesium-134 has a very small fission yield and therefore is scarcely seen in bomb debris.

Iodine-131 was observed in air filter samples until the beginning of June. Cesium-134 decreased and disappeared by mid-June while ruthenium-103 was observed in trace amounts until the end of June. The annual average concentration of gross beta radioactivity in air across Canada increased in 1986 to 0.9 mBq m^{-3} from 0.4 mBq m^{-3} in 1985 (Figure 2).

The radioactivity levels in precipitation across Canada are presented in Tables 11 to 16. Iodine-131 was first observed in precipitation with samples collected at Ottawa, Montreal and Quebec on May 6th (Table 12). By May 11-15 detectable levels were measured across the country. Vancouver on May 11-12 exhibited the maximum level of 68 Bq L^{-1} for the fallout network with a similar level of 66 Bq L^{-1} recorded for Yellowknife on May 13-14. An iodine-131 concentration of 81 Bq L^{-1} was recorded by Bedford Institute of Oceanography for a sample collected at Herring Cove, Nova Scotia on May 11th (Table 16). By mid-May the majority of precipitation samples were showing non-detectable levels of iodine-131 and by mid-June iodine-131 was non-detectable.

Radioiodine levels in several rainfall samples (Table 12) exceeded the limit of 10 Bq L^{-1} specified in the federal drinking water guidelines for continuous annual consumption. Consequently, the Department of National Health and Welfare issued an advisory on May 8th to the effect that anyone using rainwater as his/her sole source of drinking water should use an alternate source. A significant number of Canadians living in remote areas do rely on rainwater for part of their water requirements. Iodine-131 was non-detectable in water samples collected from private cisterns in Halifax and Vancouver and analyzed by local laboratories.

The deposition of gross beta radioactivity during the month of May was generally highest in Western Canada with the maximum level of 154 Bq m^{-2} recorded for Hay River, Northwest Territories (Table 14). During May iodine-131, cesium-137 and ruthenium-103 were the major radionuclides deposited with strontium-89 and strontium-90 providing only a small fraction of the total radioactivity. By June, iodine-131 was non-detectable in the samples from most locations. Deposition levels were highly correlated with rainfall occurrences at the sampling locations as the atmospheric cloud of radioactivity passed. The annual average deposition of radioactivity across Canada increased in 1986 to 265 Bq m^{-2} from 145 Bq m^{-2} in 1985 (Figure 2). Total deposition of iodine-131 over Canada was 953 terabecquerels and for combined cesium-137 and cesium-134, 415 terabecquerels.

The radioactivity levels in milk across Canada are shown in Tables 17 to 21. The appearance of iodine-131 in milk following its occurrence in fallout is relatively rapid. For raw milk collected from a dairy herd on pasture near Ottawa, the peak level of 5.5 Bq L^{-1} was recorded 4 days after the first appearance of iodine-131 in precipitation. Subsequent peaks of iodine-131 in the milk samples from

this herd showed a strong correlation to the iodine-131 concentration in air with a lag time of 3 days. The highest levels of iodine-131 measured in processed milk were about 2 Bq L⁻¹ (Table 17). The University of Alberta recorded a level of 3.4 Bq L⁻¹ for a milk sample from Edmonton on May 15th (Table 21). The average concentration from mid-May to mid-June was 0.2 Bq L⁻¹.

The appearance of cesium-137 in milk is more delayed compared to air concentrations. Levels in milk built up to a broad peak in late May and early June. The highest level of cesium-137 observed in milk from the Canadian Milk Monitoring Network (BRMD) was 2.0 Bq L⁻¹ at Vancouver on June 4th (Table 18), while a level of 4.9 Bq L⁻¹ was recorded by the Radiation Protection Service in a sample from Vancouver on May 20th (Table 21). Strontium-90 levels in milk during 1986 (Table 20) changed little from the previous year while the cesium-137 levels (Table 19) increased slightly due to fallout from the Chernobyl accident.

Food Analysis Program

Food testing for radioactivity from the Chernobyl reactor accident began with a shipment of fresh produce from Italy that arrived in Canada on May 5, 1986. The produce was found to contain iodine-131 and the shipment was destroyed.

Three main elements in the food analysis program were developed following the testing of the first contaminated produce - the development of Interim Screening Limits, testing of domestic foodstuffs and testing of imported foodstuffs.

Interim Screening Limits

At the time of the Chernobyl accident the only derived concentration limits for radioactivity in a "consumable" item were the Radiological Characteristics in the Guidelines for Canadian Drinking Water Quality - 1978 (6). These were based on an annual effective dose equivalent limit of 0.5 mSv. These guidelines were applied directly to milk and drinking water following the Chernobyl reactor accident. To calculate concentrations for other foodstuffs the following equation was used:

$$\text{Concentration (Bq kg}^{-1}\text{)} = \frac{\text{Annual Limit on Intake/100 (becquerels)}}{\text{Annual Consumption (kilograms)}}$$

The Annual Limits on Intake are those given in ICRP-30 (9). Annual consumption of various food categories was calculated from the Nutrition Canada's Food Consumption Patterns Report - 1976 (7). The observed intake of the age group that consumed the most was used. A detailed summary of the derivation of the Interim Screening Limits is given in Reference 11. Table 22 summarizes the limits.

Domestic Foodstuffs

The testing was done in two stages. For approximately one month after the accident the focus was on the deposition of iodine-131 on fresh produce. Later the emphasis shifted to the movement of cesium-137 and 134 through the food chain to animals and fish.

Sampling was conducted by the Field Operations Directorate (NHW), Agriculture Canada, the Department of Fisheries and Oceans and provincial officials. The analyses by BRMD were conducted using high resolution gamma spectrometers in either a 500 mL, 1 or 3.5 litre geometry depending on the amount of sample available.

The results of this program are given in Tables 23 and 24. These are arrayed by sample type and the data collected. The primary emphasis was on food for commercial sale and native foodstuffs. Iodine-131 was detected in foodstuffs in every province in which testing was done. However, with the exception of one sample of goat milk from Ontario, all samples met the Interim Screening Limits. The single goats milk sample was not from a commercial operation. Because of the time of year, British Columbia had the most extensive crops of fresh produce. Cesium-137 levels were low or not detectable in all samples.

Concern over radioactivity in reindeer herds in Scandinavia raised questions concerning caribou in northern Canada. One sample was tested in mid-May and found to have very low levels of iodine-131. Cesium-137 from the accident had not had time to be taken up in the tissue. Levels in the post-accident samples were considerably lower than the pre-accident sample, reflecting individual variation between animals. A more detailed study of caribou has been organized for 1987.

Imported Foodstuffs

Following the discovery of the contaminated produce from Europe on May 5, 1986, the Health Protection Branch issued a Customs Alert to Revenue Canada, Customs and Excise. The Alert requested that all commercial shipments of fresh fruit, fresh

vegetables and fresh herbs of European origin be held at the Points of Entry to Canada pending analysis of radioactivity. During succeeding months the products tested and types of radioactivity measured changed considerably. Arrangements were made with federal and provincial laboratories to have samples tested close to the Port of Entry.

The results of this screening program are given in Tables 25 and 26. These tables are organized by sample type, country of origin and the sample collection date. By the end of 1986 300 samples had been tested; 12 shipments were denied entry into Canada because they did not meet the screening limits.

The purpose of this screening program was to ensure that Canadians would not be unnecessarily exposed to radioactivity in imported foods. From the results the purpose of the program has been achieved. As there continue to be reports of contaminated foodstuffs around the world, the program is continuing in 1987.

It was recognized that the disparity in limits established by different countries lead to confusion in international trade. The Health Protection Branch participated in an Expert Consultation of the Food and Agriculture Organization of the United Nations on Recommended Limits for Radionuclide Contamination of Foods in December 1986.

The necessity for a common approach within Canada for the development of guidelines for radionuclides in food lead to the creation in November of 1986 of a Federal/Provincial Ad Hoc Task Force on Nuclear Emergency Intervention Levels.

Dose Assessment

Radiation doses to Canadians from fallout could result from four major pathways of exposure:

- inhalation of airborne radioactivity;
- direct exposure to radioactivity deposited on the ground;
- ingestion of milk;
- ingestion of other foods.

To estimate the dose to an individual from each of these pathways, it is useful to employ the concepts of the International Commission on Radiological Protection (ICRP) and in particular the concept of Annual Limit of Intake (ALI) and Derived Air Concentration (8,9). An intake of one ALI by an average adult results in the individual receiving an effective dose equivalent to 50 millisieverts.

On the basis of the radionuclide concentrations in air, milk and foods during May and June, estimated average doses to Canadians from inhalation, ground deposition and consumption of milk and other foods are summarized in Table 36. Since not all foods were measured, the contribution from other foods was assumed equal to that of milk and provides a conservative upper limit. Ground deposition of radionuclides provides too low a dose rate to be measureable directly against the fluctuating background dose rate of $0.05\text{--}0.07\mu\text{Gy h}^{-1}$ (Table 30). Therefore doses in Table 36 are estimated from deposited radionuclides using photon dose-rate conversion factors (14).

The ingestion pathway, including milk and other foods, accounts for 55 percent of the average estimated dose received from Chernobyl fallout. The contribution from ground deposition accounts for 40 percent with the remaining 5 percent received from inhalation. The total dose for this period varied across Canada from a high of 1.63 microsieverts for Vancouver where deposition and milk levels of radionuclides were highest to a low of 0.17 microsieverts for Toronto with a national average of 0.58 microsieverts (collective dose 14.8 person-sieverts). The radiation dose exposures to Canadians from fallout due to the Chernobyl accident were extremely low. A very conservative estimate for one year of exposure to Chernobyl fallout would raise these estimates by a factor of four - for example to a total of 6.5 microsieverts for Vancouver and 2.3 microsieverts for the national average. No groups in the population received more than 10 microsieverts.

By contrast to the dose from Chernobyl fallout, the range of average annual exposure to background radiation from natural terrestrial radiation and cosmic radiation (Table 30) is 440 to 790 microsieverts. This dose from external gamma radiation represents approximately 30 percent of the total background to which Canadians are exposed. The doses from natural radionuclides in drinking water (Tables 33 and 34) range from 1 to 7 microsieverts.

A dose of one sievert is associated with an increased cancer risk of one percent (8). There is no evidence of increased cancer risk at levels of radiation approaching background values. However, radiation protection authorities (8) assume that there is no threshold to radiation-induced cancer and that the risk is directly proportional to the dose. Thus a dose of 10 microsieverts would give an increased risk of one in 10 million over a lifetime.

RADIOACTIVITY FROM NUCLEAR REACTORS

Environmental radioactivity studies are carried out in the vicinity of 8 nuclear reactor sites in Canada:

- the Whiteshell Nuclear Research Establishment (AECL-WNRE), Pinawa, Manitoba;
- the Bruce Nuclear Power Development, Tiverton, Ontario, with seven 750 MW(e) units in service, (four at Bruce A and three at Bruce B), and one 750 MW(e) unit under construction at Bruce B;
- the Pickering Nuclear Generating Station, Pickering, Ontario, with six 500 MW(e) units in service (two at Pickering A and four at Pickering B), and two undergoing retubing (Pickering A);
- the Darlington Nuclear Generating Station, Newcastle, Ontario, with four 880 MW(e) units under construction;
- the Nuclear Power Demonstration Reactor, Rolphton, Ontario, 25 MW(e);
- the Chalk River Nuclear Laboratories (AECL-CRNL), Chalk River, Ontario;
- the Gentilly Nuclear Site, Gentilly, Quebec, 600 MW(e);
- the Point Lepreau Nuclear Generating Station, Point Lepreau, New Brunswick, 600 MW(e).

Samples of air water vapour, drinking water and milk are collected at the locations shown in Figures 3 to 9. Dose rate measurements of external gamma radiation are made around Bruce, Pickering, Darlington, Gentilly and Point Lepreau. Routine monitoring is also carried out for radioactivity in air particulates near the McMaster University Research Reactor, Hamilton, Ontario and in air particulates and sea water during visits of nuclear vessels to CFB Shearwater, Halifax, Nova Scotia.

Air Water Vapour

Atmospheric water vapour is collected in metallic cells containing molecular sieve material. These cells are placed around the Bruce, Pickering, Darlington, Gentilly and Point Lepreau reactor sites (see Figures 3 to 7). Air is drawn through the cells over a period of a month and deposits atmospheric moisture on the sieve. Subsequently, the cells are heated to desorb the water which is then analyzed for tritium by liquid scintillation counting.

Pre-operational monitoring of Ontario Hydro's new Darlington Nuclear Generating Station began in February 1986. Initially, four atmospheric water vapour

samplers were installed to the east and to the west of the reactor site. Then in early September 1986, three more samplers were installed to the north of the site.

The first Darlington reactor is scheduled to be in service sometime in 1988 and the last to be completed in 1992. Until the first unit becomes operational, atmospheric water vapour will be collected by the seven atmospheric water vapour samplers to establish background levels of tritium.

The results for 1986 are given in Table 27. For each monthly sample, the detection limit depends on the volume of air drawn through the cell and the moisture content. To prevent the molecular sieve from becoming saturated, flow rates from May to September inclusive are lower than those for October to April ($0.06 \text{ m}^3 \text{ d}^{-1}$ and $0.2 \text{ m}^3 \text{ d}^{-1}$, respectively).

Values in 1986 were roughly comparable to those in 1985. The highest concentrations observed at Bruce was 7.8 Bq m^{-3} in October and at Pickering, 35 Bq m^{-3} in March. Results at Gentilly and Point Lepreau were very close to background. Background levels are reported for Darlington.

Water

Untreated water is collected daily at drinking water intakes on the Winnipeg River, Lakes Huron and Ontario, the Ottawa River and the St. Lawrence River (Figures 3 to 9). A new station at Ajax, Ontario was added to the reactor water network in January. Results of the quarterly analyses for strontium-90 and cesium-137 are given in Tables 28 and 29. Even though strontium-90 and cesium-137 were detected in rain water across Canada during May and June of this year, due to dilution, levels in sampled lake or river water were not elevated above their normal seasonal values. The highest concentrations measured, 26 mBq L^{-1} for strontium-90, and 7 mBq L^{-1} for cesium-137, were factors of 400 and 7000 respectively below the maximum acceptable concentrations of 10 Bq L^{-1} and 50 Bq L^{-1} recommended for Canadian drinking water (6).

Milk

Monthly samples of raw milk from the vicinity of Whiteshell and Bruce are analyzed for iodine-131, cesium-137 and potassium-40. Iodine-131 was not detected at either location in May or June as the samples were not counted immediately after collection and therefore, the iodine-131 had decayed to a value that was no longer detectable at the time of analysis. Cesium-137 concentration at the reactor

locations (last two lines of Table 19) were of the same order as values obtained in the fallout network. The cesium-137 levels were highest in May and then decreased to normal levels. This indicates that fallout from the Chernobyl accident in the U.S.S.R. and residual fallout from past testing of nuclear weapons are the major contributors to cesium-137 levels in milk at reactor locations.

External Radiation Exposure

The measurements of external gamma radiation dose rates are carried out quarterly at 27 environmental stations and at 29 locations around the five nuclear reactor sites (Bruce, Pickering, Gentilly, Point Lepreau and Darlington). This is an increase of 16 over last year with additional environmental stations and the reactor site at Darlington added to the program. Measurements are performed quarterly, using $\text{CaF}_2\text{:Mn}$ bulb TLDs. Figure 1 shows the 27 municipalities in which environmental dose rate measurements are now made. The TLDs are attached to the weather housing of the air sampling equipment. Figures 3 to 7 show the 29 locations for reactor environs monitoring at Bruce, Pickering, Gentilly, Pt. Lepreau and Darlington. At these sites, the TLDs are attached to the housing of the air water vapour collection units.

Average quarterly dose rates for 1986, together with the yearly cumulative doses, are presented in Tables 30 and 31. Occasionally, TLDs are lost in transit or through vandalism. No quarterly value is reported in such cases; however, in determining the cumulative value, the average value for the remaining quarters is assumed. The values in Table 30 from the environmental stations give an indication of the range of normal background dose rates across Canada. The values from the reactor environs in Table 31 fall within the same range. This indicates that these doses are attributable to normal background radiation.

McMaster University

Gross beta radioactivity on air filters was normal up to May and then became elevated following the Chernobyl accident in the U.S.S.R. The elevated values lasted until June and then returned to normal for the rest of the year.

Nuclear Vessels

Seven nuclear submarines visited Shearwater, Nova Scotia during 1986. Gross beta radioactivity was measured on air filters and gross gamma activity on seawater

samples collected before, during and after the visits. No activity attributable to a release from the vessels was found.

Nuclear submarines periodically visit CFB Esquimalt or Nanoose Bay, B.C. Sediments and biota from the harbour are monitored for gamma radiation twice yearly by the British Columbia Ministry of Health. Results are forwarded to the Bureau of Radiation and Medical Devices. No activity attributable to submarine visits has been detected.

RESEARCH PROJECTS

Human Bone Studies

Since 1958 the Bureau of Radiation and Medical Devices has collected more than 5000 vertebrae samples from hospitals across Canada in connection with the fallout strontium-90 program. Sufficient samples exist to examine levels of other long-lived radionuclides and toxic metals and to study variations with age, sex, year of death, cause of death and geographical location.

Stable lead measurements have been carried out in a portion of these bone samples in cooperation with the inorganic chemistry section, Bureau of Chemical Hazards. A report has been prepared on the results of the study (12).

Measurements of lead-210 in bone are planned to determine if this radionuclide behaves in the same manner as stable lead. The first step is selection of an analytical procedure. A method is being tested involving the spontaneous electrodeposition of polonium-210 on silver with the assumption that the bone is sufficiently old that the lead-210 and polonium-210 are in equilibrium.

Methods Development and Instrumentation

The PDP 11/44 mini-computer which controls the nuclear counting instrumentation of the Division has been updated by the addition of 2 megabytes of MOS memory, an 857 megabyte Winchester mass storage sub-system and a back up and transfer magnetic tape system. A new liquid scintillation counter, alpha spectrometer and germanium detector have been acquired. Work is underway to perfect methods for the analysis of radium-228 and isotopic uranium.

The feasibility study continues to determine the sensitivity of $\text{CaF}_2\text{:Mn}$ thermoluminescent dosimeter (TLD) chips v.s. $\text{CaF}_2\text{:Mn}$ TLD bulbs in the measurement of environmental levels of external gamma radiation dose rates.

Laboratory quality control programs continued through participation in inter-laboratory comparisons sponsored by the United States Environmental Protection Agency and the U.S. Department of Energy. The performance of the Division is summarized in Table 35.

NATURAL RADIOACTIVITY

Studies of population exposures due to natural radioactivity continued with radiochemical analyses of drinking water for radium-226 and total uranium. The concentrations measured during 1986 were less than the Maximum Acceptable Concentrations of 1 Bq L^{-1} for radium-226 and $20 \mu\text{g L}^{-1}$ for uranium recommended in the Guidelines for Canadian Drinking Water Quality, 1978 (6).

Drinking Water

Monthly composite samples of drinking water were collected for January, February and March from the four municipalities shown in Tables 33 and 34. Beginning in April, sampling procedures were changed. At Elliot Lake, treated water only was collected monthly for April, May and June, with 3 month composites for the balance of the year. Monthly sampling and analysis of Regina water was retained all year while 3 month composite samples were analysed from Port Hope. Sampling of water from Ottawa was discontinued.

The results for radium-226 are presented in Table 33. For the most part, the concentrations were at or near the detection limit of 5 mBq L^{-1} . The highest concentrations continued to be observed in water from Elliot Lake. The range is from 13 mBq L^{-1} in January to 23 mBq L^{-1} in May. The town is located at the center of uranium mining activities in Ontario.

The uranium concentrations in Table 34 show considerable variations with time and location. As observed in previous reports, the highest concentrations occurred at Regina ($7.5 \mu\text{g L}^{-1}$ in March). Regina draws part of its drinking water requirements from ground water sources whereas all other locations rely entirely on surface waters.

In cooperation with the Province of Manitoba, the study on natural radioactivity levels in water supplies of communities supplied by ground water sources continued. A total of 130 communities are included in the program. Determinations of radon-222, radium-226, lead-210 and total uranium have been completed for raw water. Analyses for radium-228, delayed due to Chernobyl priorities, are now in progress.

In cooperation with the Province of Saskatchewan, a study has been initiated on natural uranium levels in well and surface waters supplying drinking water to the

city of Regina. The project will include total and isotopic uranium analyses on these waters.

Radon Studies

The full case-control study of lung cancer and domestic exposure to radon was continued in Winnipeg. Staff of the Manitoba Cancer Treatment and Research Foundation interviewed 150 pairs of cases and controls during the year. Four hundred radon dosimeter results for six-month exposure periods have been analyzed and compared with the mean of the national radon survey.

A small passive radon dosimeter based on alpha track detection in CR-39 plastic (polyallyl di-glycol carbonate) was developed for use both in-house and for the case control studies. The 4 cm² detector is housed in a 17 mL sample vial with a child resistant top which allows radon to diffuse into the chamber. Several different formulations of CR-39 have been evaluated under various etchant conditions. A six-month field trial of the dosimeter has been initiated.

OTHER ACTIVITIES

Emergency Planning

The Chernobyl nuclear accident acted as a partial test of the Federal Nuclear Emergency Response Plan. The Minister of National Health and Welfare invoked the plan and it was implemented to handle the increased workload of BRMD and to obtain the assistance of provincial authorities for the use of equipment and services to monitor local food and imported food at the port of entry.

Difficulties in communicating information to the public and in receiving enquiries from the public indicated that the public information policy needs comprehensive development.

A BRMD staff member was a member of the Canadian delegation to the International Atomic Energy Agency in Vienna that drafted two international agreements: The Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency.

A consultant was hired to evaluate the Department's response to the Chernobyl event.

Nuclear Power Sources in Outer Space

Because of expertise available within the Bureau resulting from our experience with Cosmos 954 and Canada's continuing leading role at the United Nations Committee on the Peaceful Use of Outer Space on matters related to the use of nuclear power sources, the Bureau is consulted by the Department of External Affairs on an annual basis. As a result, papers of a semi-technical nature are prepared in the Bureau to assist the Department of External Affairs in seeking an international consensus on the use of space nuclear power.

Two legal principles were established in 1986. One principle related to the format of notification in the case of future accidents involving re-entry into the atmosphere of a nuclear power source. The second related to assistance to states, when requested, where a nuclear power source impacts on that state.

The latter assistance is consistent with the Vienna Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency and may require a contribution from the Division by way of radiologically trained personnel.

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3. Huda, H., A.M. Sourkes and B.L. Tracy, "Chernobyl - The Radiological Impact on Canada", submitted to the Journal of the Canadian Association of Radiologists.
4. Meyerhof, D.P., B.L. Tracy and R.S. Eaton, "Canadian Approach to the Derivation of Screening Limits for Radionuclides in Foodstuffs following the Chernobyl Nuclear Reactor Accident", Discussion paper for Expert Consultation on Recommended Limits for Radionuclide Contamination in Foods, Food and Agriculture Organization, Rome, Dec. 1-5, 1986.
5. Samuels, E.R., J.C. Méranter and B.L. Tracy, "Lead Concentrations in Human Bones from Canadian Population", submitted to Archives for Environmental Health.
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Table 1

Chernobyl Reactor Accident Monitoring
Laboratory Identification for Reported Data
from Other Agencies

<u>Reporting Agency</u>	<u>Address</u>
BIO	Department of Fisheries and Oceans Atlantic Oceanographic Laboratories Bedford Institute of Oceanography Box 1006 Dartmouth, Nova Scotia B2Y 4A2 Attn: Dr. John Smith (902) 426-3865
MOL	Radiation Protection Laboratories Ontario Ministry of Labour 81 Resources Road Weston, Ontario M9P 3T1 Attn: Mr. John Tai-Pow (416) 235-5913
NBEPC	New Brunswick Electric Power Commission Box 2000 Fredericton, New Brunswick E3B 4X4 Attn: Mr. John Sutherland (506) 455-2427
OH	Ontario Hydro Health Physics Services Health and Safety Division 757 McKay Road Pickering, Ontario L1W 3C8 Attn: Mr. G.J. Pilar (416) 683-7516
RPS	Radiation Protection Service British Columbia Ministry of Health 200-307 West Broadway Vancouver, British Columbia V5Y 1P9 Attn: Mr. Brian Phillips (604) 660-6633

Table 1 (cont'd)

SRC	Saskatchewan Research Council 15 Innovation Blvd. Saskatoon, Saskatchewan S7N 2X8 Attn: Dr. Gene Smithson (306) 933-5439
SREQ	Environment Quebec Radioprotection Services 5199 Sherbrooke St. East Suite 3860 Montreal, Quebec K1T 3X9 Attn: Dr. J.M. Légaré (514) 873-1978
TRIUMF	TRIUMF 4004 Wesbrook Mall Vancouver, British Columbia V6T 2A3 Attn: Mr. Ian Thorson (604) 222-1047
U of A	University of Alberta Department of Pharmacy Slow Poke Laboratory Edmonton, Alberta T6G 2E1 Attn: Mr. Peter Ford (403) 432-4978
U of V	University of Victoria Occupational Health and Safety Office P.O. Box 1700 Victoria, British Columbia V8W 2Y2 Attn: Mr. Richard Piskor (604) 721-8875
WNRE	Whiteshell Nuclear Research Establishment Atomic Energy of Canada Ltd. Pinawa, Manitoba R0E 1L0 Attn: Mr. Don Dixon (204) 753-2311 Loc. 2860

Table 2.

Chernobyl Reactor Accident Monitoring
Grouping of Air Filter Sample Locations

<u>Group</u>	<u>Locations</u>
1.	Vancouver
2.	Edmonton, Calgary
3.	Saskatoon, Regina
4.	Winnipeg
5.	Moosonee, Thunder Bay, Sault Ste. Marie
6.	Windsor, Hamilton, Toronto
7.	Ottawa
8.	Montreal, Quebec
9.	Fredericton
10.	Digby, Halifax, Greenwood
11.	St. Johns
12.	Whitehorse, Inuvik, Yellowknife, Hay River, Resolute, Churchill, Coral Harbour, Goose Bay

Table 3. Chernobyl Reactor Accident Monitoring:
Surface Air Samples, Gross Beta Radioactivity
(Millibecquerels per cubic metre)

STATION	APRIL 24-29	APRIL 29-30	APR/MAY 30-1	MAY 1-2	MAY 2-3	MAY 3-4	MAY 4-5	MAY 5-6	MAY 6-7	MAY 7-8	MAY 8-9	MAY 9-10	MAY 10-11	MAY 11-12	MAY 12-13
Vancouver, B.C.	0.24	0.20	0.47	0.67	0.29	0.42	0.37	1.1	0.38	1.5	2.5	18	38	7.4	15
Edmonton, Alta.	0.38	0.36	0.63	0.50	0.42	0.51	2.1	0.91	2.7	2.3	5.5	61	78	57	27
Calgary, Alta.	0.51	*	0.21	0.31	0.56	0.81	3.4	0.80	1.1	1.1	2.3	37	51	40	16
Saskatoon, Sask.	0.51	0.25	0.13	0.20	0.31	0.99	2.7	2.2	0.14	1.4	6.7	1.0	17	17	33
Regina, Sask.	0.28	0.28	1.5	0.45	0.49	1.0	1.2	0.54	0.82	1.9	8.8	0.47	11	7.3	31
Winnipeg, Man.	0.15	0.34	0.29	0.52	0.59	0.99	1.8	0.36	2.2	3.2	4.4	1.8	1.9	7.4	38
Thunder Bay, Ont.	0.62	0.75	0.54	1.1	1.4	1.3	2.1	0.66	0.29	8.2	7.7	2.8	0.73	13	8.3
Sault Ste. Marie, Ont.	0.50	0.50	0.76	0.67	0.82	1.2	3.4	1.1	0.37	1.1	4.2	1.4	8.2	8.3	20
Moosonee, Ont.	0.28	-	0.43	0.49	0.69	0.48	0.37	0.37	0.78	1.1	0.88	0.84	0.48	3.9	9.2
Toronto, Ont.	0.40	0.67	0.21	0.73	0.81	1.2	1.3	2.7	1.2	0.46	0.74	2.8	14	3.2	12
Windsor, Ont.	0.50	0.12	0.38	0.52	0.85	1.2	0.87	3.2	1.5	0.41	1.3	1.7	7.6	13	15
Ottawa, (Airport)	0.40	0.79	1.1	0.44	0.51	0.47	0.77	0.96	1.3	0.26	2.2	16	9.1	9.7	7.2
(BRMP)	0.48	0.74	0.93	0.68	0.82	0.75	1.0	1.3	1.6	0.38	4.1	22	7.2	12	8.9
Montreal, P.Q.	0.77	0.80	1.7	0.58	1.0	0.92	0.92	1.7	1.9	0.79	3.4	20	13	12	6.6
Quebec, P.Q.	0.20	0.51	0.53	0.41	0.78	0.63	0.62	1.2	1.7	2.6	6.9	15	9.5	5.3	9.1
Fredericton, N.B.	0.13	0.45	0.35	0.24	0.38	0.52	0.75	0.65	1.7	2.1	4.4	34	28	6.8	7.1
Halifax, N.S.	0.15	0.24	0.46	0.20	0.35	0.45	0.92	0.61	0.60	1.0	6.4	34	8.3	8.0	10
Digby, N.S.	0.17	0.21	0.07	0.14	0.21	0.56	0.66	0.55	0.36	1.0	6.1	28	23	8.1	10
Greenwood, N.S.	0.19	0.31	0.32	0.27	0.42	0.57	1.6	0.54	0.78	1.1	4.8	24	16	4.8	9.8
St. John's Nfld.	0.08	0.26	0.27	0.12	0.07	0.28	0.71	0.06	0.15	-	-	4.9	4.6	2.1	4.1
Whitehorse, Y.T.	0.31	.....	0.41	0.67	0.85	0.74	0.42	0.66	0.59	1.8	1.3	1.1	1.9	1.8	30
Inuvik, N.W.T.	0.93	1.3	0.92	0.73	0.57	0.56	1.1	0.87	1.1	1.3	1.1	1.2	0.51	3.7	4.0
Yellowknife, N.W.T.	0.20	0.13	0.27	0.78	0.26	0.15	0.32	0.32	0.37	0.41	3.1	2.4	2.1	0.80	0.38
Hay River, N.W.T.	0.53	0.45	0.71	0.66	.....	.....	.....	0.74	0.81	0.89	5.3	.....	.....	.....	6.5
Resolute, N.W.T.	0.76	0.70	0.87	0.87	2.0	4.5	-	2.8	2.3	3.5	3.0	2.1	1.3	.....	2.9
Coral Harbour, N.W.T.	0.76	0.69	0.87	0.87	0.91	0.83	1.1	1.9	1.2	0.96	2.9	5.6	.....	.....	1.1
Churchill, Man.	0.68	0.02	0.64	0.99	0.87	0.78	0.84	0.73	0.90	0.97	0.80	0.87	5.5	2.2	2.2
Goose Bay, Nfld.	0.17	0.62	0.16	0.26	0.18	0.04	0.37	0.19	0.25	3.2	11	9.9	0.74	20	12

* Less than Detection Limit of 0.01 mBq m⁻³
- No Sample

Table 3 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Gross Beta Radioactivity
(Millibecquerels per cubic metre)

STATION	MAY 13-14	MAY 14-15	MAY 15-16	MAY 16-17	MAY 17-18	MAY 18-19	MAY 19-20	MAY 20-21	MAY 21-22	MAY 22-23	MAY 23-24	MAY 24-25	MAY 25-26	MAY 26-27	MAY 27-28
Vancouver, B.C.	2.6	4.4	6.3	33	36	20	7.2	12	5.7	4.6	8.3	8.9	3.9	2.2	1.2
Edmonton, Alta.	17	26	17	31	12	10	5.2	6.8	5.9	11	4.9	13	8.3	7.1	2.8
Calgary, Alta.	3.1	20	30	31	13	5.1	5.8	6.6	2.8	9.4	5.9	9.6	7.4	6.6	4.5
Saskatoon, Sask.	5.2	2.0	0.58	14	24	16	8.7	11	12	7.3	6.3	6.6	5.7	5.9	3.5
Regina, Sask.	9.7	1.9	0.44	8.4	20	9.9	6.5	9.5	11	8.6	7.3	5.1	4.7	3.7	2.6
Winnipeg, Man.	55	24	13	0.67	4.1	16	26	16	22	18	6.7	0.66	-	-	7.6
Thunder Bay, Ont.	12	16	3.5	11	0.77	9.8	12	25	-	15	12	14	5.6	4.4	8.7
Sault Ste. Marie, Ont.	6.3	5.1	4.8	4.7	2.2	3.9	11	17	2.7	1.0	7.5	0.86	6.3	6.8	4.8
Moosonee, Ont.	7.7	7.1	3.6	1.7	1.6	3.1	3.0	3.8	8.8	8.3	9.2	5.5	7.2	5.3	3.9
Toronto, Ont.	7.9	9.2	4.2	2.1	12	1.6	0.38	0.50	0.96	1.8	0.89	0.50	6.3	8.2	4.8
Windsor, Ont.	7.6	12	3.0	2.4	4.5	0.66	0.38	1.3	19	9.0	2.0	0.84	2.8	6.8	2.7
Ottawa, (Airport) (BRND)	13	13	4.5	1.3	4.8	1.4	0.79	0.22	0.28	0.25	0.36	5.9	10	8.4	5.9
Montreal, P.Q.	19	14	5.1	1.9	5.4	1.6	1.1	0.48	0.41	0.38	0.83	7.7	11	9.8	6.0
Quebec, P.Q.	19	24	5.0	2.8	1.9	2.3	1.7	0.51	0.64	0.43	5.7	4.1	11	11	8.5
Fredericton, N.B.	27	17	21	7.8	7.0	2.3	1.4	0.46	1.1	1.3	7.3	7.2	8.6	7.6	6.9
Halifax, N.S.	17	14	16	9.9	6.5	2.1	3.0	2.9	1.7	8.7	0.77	4.7	7.0	6.2	7.1
Digby, N.S.	22	17	16	10	4.8	1.8	3.9	3.6	5.5	8.4	1.8	0.28	2.0	5.1	6.2
Greenwood, N.S.	19	15	16	17	3.7	2.0	2.2	2.4	2.6	12	0.31	0.14	4.6	7.7	6.5
St. John's Nfld.	11	12	15	11	6.4	4.7	1.1	2.5	5.1	1.5	5.3	3.1	3.9	7.2	6.7
Whitehorse, Y.T.	14	5.4	3.8	10	2.6	18	9.3	7.0	1.5	1.6	2.9	5.5	1.4	2.0	2.7
Inuvik, N.W.T.	4.3	2.6	1.8	2.1	3.4	3.4	2.6	3.1	1.5	1.6	2.9	5.5	1.4	1.1	0.22
Yellowknife, N.W.T.	29	1.4	1.4	5.5	16	7.3	9.1	4.3	5.3	7.8	5.6	3.5	4.0	2.6	2.7
Hay River, N.W.T.	26	5.3	6.6	2.3	13	2.0	9.2	8.0	7.6	2.5	4.0	2.4	4.1	2.4	0.59
Resolute, N.W.T.	0.99	1.5	2.0	2.3	2.7	2.0	3.1	2.6	2.7	8.1	5.8	5.8	5.8	4.0	0.56
Coral Harbour, N.W.T.	3.9	2.8	2.3	1.8	3.4	2.3	6.3	5.4	3.8	2.7	2.6	0.27	2.6	2.4	.....
Churchill, Man.	2.4	3.7	1.6	3.3	4.1	5.2	12	12	16	11	4.2	2.7	2.4	3.6	4.5
Goose Bay, Nfld.	8.8	8.6	8.6	9.6	6.9	1.4	2.7	5.1	10	6.1	2.0	1.7	4.2	1.9	1.6
														5.2	0.88

- no sample

Table 3 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Gross Beta Radioactivity
(Millibecquerels per cubic metre)

STATION	MAY 28-29	MAY 29-30	MAY 30-31	MAY/JUNE 31-01	JUNE 01-02	JUNE 02-03	JUNE 03-04	JUNE 04-05	JUNE 05-06	JUNE 06-07	JUNE 07-08	JUNE 08-09	JUNE 09-10	JUNE 10-11	JUNE 11-12
Vancouver, B.C.	1.7	3.1	+	+	1.2	+	+	+	+	+	+	0.71	+	+	+
Edmonton, Alta.	4.1	4.3	+	+	1.8	+	+	+	+	+	+	0.92	+	+	+
Calgary, Alta.	5.0	4.3	+	+	1.8	+	+	+	+	+	+	0.63	+	+	+
Saskatoon, Sask.	3.6	3.2	+	+	1.2	+	+	+	+	+	+	0.95	+	+	+
Regina, Sask.	3.5	2.8	+	+	1.2	+	+	+	+	+	+	0.72	+	+	+
Winnipeg, Man.	7.7	4.5	+	+	2.1	+	+	+	+	+	+	1.2	+	+	+
Thunder Bay, Ont.	8.7	10	+	+	9.8	+	+	+	+	+	+	2.5	+	+	1.1
Sault Ste. Marie, Ont.	7.3	6.5	+	+	7.7	+	+	+	+	+	+	1.7	+	+	+
Moosonee, Ont.	2.5	1.7	+	+	3.5	+	+	+	+	+	+	1.7	+	+	+
Toronto, Ont.	6.9	7.0	+	+	4.9	+	+	+	+	+	+	1.9	+	+	0.94
Windsor, Ont.	4.0	4.0	+	+	5.7	+	+	3.7	+	+	+	0.57	+	+	0.40
Ottawa, (Airport)	4.4	5.2	+	+	6.0	+	+	+	+	+	+	1.3	+	+	+
(BRMD)	5.5	6.1	+	+	8.6	+	12	5.1	+	+	+	3.8	+	+	0.78
Montreal, P.Q.	5.6	5.2	+	+	9.2	13	9.1	5.5	+	+	+	1.8	+	+	+
Quebec, P.Q.	7.0	5.5	+	+	5.0	5.0	+	+	+	+	+	1.7	+	+	+
Fredericton, N.B.	2.9	4.4	+	+	4.9	+	+	+	+	+	+	1.4	+	+	+
Halifax, N.S.	2.6	5.8	+	+	2.1	2.7	7.0	12	7.0	+	+	1.5	+	+	+
Digby, N.S.	3.0	5.6	+	+	0.89	+	+	10	+	+	+	1.0	+	+	+
Greenwood, N.S.	2.9	4.1	+	+	2.4	+	+	+	+	+	+	1.3	+	+	+
St. John's Nfld.	0.54	3.7	+	+	0.46	+	+	+	+	+	+	1.0	+	+	+
Whitehorse, Y.T.	0.50	0.36	+	+	1.3	+	+	+	+	+	+	0.5	+	+	+
Inuvik, N.W.T.	5.6	+	+	+	7.0	+	+	+	+	+	+	2.1	+	+	+
Yellowknife, N.W.T.	4.5	6.5	+	+	3.4	+	+	+	+	+	+	1.6	+	+	+
Hay River, N.W.T.	3.9	6.8	+	+	5.0	+	+	+	+	+	+	1.5	+	+	+
Resolute, N.W.T.	3.8	2.6	+	+	1.5	+	+	+	+	+	+	0.99	+	+	+
Coral Harbour, N.W.T.	2.3	4.7	+	+	2.4	+	+	+	+	+	+	1.7	+	+	+
Churchill, Man.	1.4	5.3	+	+	3.3	+	+	+	+	+	+	1.5	+	+	+
Goose Bay, Nfld.	0.28	1.2	+	+	1.4	+	+	+	+	+	+	0.43	+	+	+

Table 3 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Gross Beta Radioactivity
(Millibecquerels per cubic metre)

STATION	JUNE 12-13	JUNE 13-14	JUNE 14-15	JUNE 15-16	JUNE 16-17	JUNE 17-18	JUNE 18-19	JUNE 19-20	JUNE 20-21	JUNE 21-22	JUNE 22-23	JUNE 23-24	JUNE 24-25	JUNE 25-26	JUNE 26-27
Vancouver, B.C.	0.71	+	+	+	0.30	+	+	+	+	+	+	0.19	+	+	+
Edmonton, Alta.	+	+	+	+	0.61	+	+	+	+	+	+	0.63	+	+	+
Calgary, Alta.	+	+	+	+	0.54	+	+	+	+	+	+	0.24	+	+	+
Saskatoon, Sask.	+	+	+	+	0.76	+	+	+	+	+	+	0.32	+	+	+
Regina, Sask.	+	+	+	+	0.66	+	+	+	+	+	+	0.22	+	+	+
Winnipeg, Man.	+	+	+	+	0.70	+	+	+	+	+	+	0.13	+	+	+
Thunder Bay, Ont.	+	+	+	+	0.88	+	+	+	+	+	+	0.58	+	+	+
Sault Ste. Marie, Ont.	+	+	+	+	0.62	+	+	+	+	+	+	0.37	+	+	+
Moosonee, Ont.	+	+	+	+	0.46	+	+	+	+	+	+	0.42	+	+	+
Toronto, Ont.	+	+	+	+	0.61	+	+	+	+	+	1.1	+	+	0.72	+
Windsor, Ont.	+	+	+	+	0.71	+	+	+	+	+	1.2	+	+	0.83	+
Ottawa, (Airport) (BRMD)	+	+	+	+	0.47	+	+	+	+	0.89	+	0.43	+	+	+
Montreal, P.Q.	+	+	0.45	+	0.51	0.49	1.2	1.1	+	+	+	0.56	0.30	0.47	0.67
Quebec, P.Q.	+	+	+	+	0.54	+	+	+	+	+	+	0.47	+	+	+
Fredericton, N.B.	+	+	+	+	0.45	+	+	+	+	+	+	0.44	+	+	+
Halifax, N.S.	+	+	+	+	0.43	+	+	+	+	+	+	0.86	+	+	+
Digby, N.S.	+	+	+	+	0.41	+	+	+	+	+	+	0.43	+	+	+
Greenwood, N.S.	+	+	+	+	0.44	+	+	+	+	+	+	0.41	+	+	+
St. John's NFld.	+	+	+	+	0.38	+	+	+	+	+	+	0.36	+	+	+
Whitehorse, Y.T.	+	+	+	+	0.28	+	+	+	+	+	+	+	+	+	+
Inuvik, N.W.T.	+	+	+	+	0.64	+	+	+	+	+	+	0.06	+	+	+
Yellowknife, N.W.T.	+	+	+	+	1.3	+	+	+	+	+	+	0.35	+	+	+
Hay River, N.W.T.	+	+	+	+	1.1	+	+	+	+	+	+	0.21	+	+	+
Resolute, N.W.T.	+	+	+	+	1.4	+	+	+	+	+	+	0.17	+	+	+
Coral Harbour, N.W.T.	+	+	+	+	0.75	+	+	+	+	+	+	0.12	+	+	+
Churchill, Man.	+	+	+	+	1.5	+	+	+	+	+	+	0.33	+	+	+
Goose Bay, NFld.	+	+	+	+	1.5	+	+	+	+	+	+	0.29	+	+	+
	+	+	+	+	0.08	+	+	+	+	+	+	0.05	+	+	+

- no sample

Table 4. Gross Beta Activity in the Canadian Air Monitoring Network 1986
(Millibecquerels per cubic metre)

Sampling Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.
Calgary	0.4	0.3	0.3	0.5	9.3	0.4	0.3	0.4	0.4	0.3	0.4	0.3	1.1
Churchill	0.7	0.7	0.8	0.5	4.0	0.8	0.2	0.1	0.2	0.2	0.6	0.7	0.8
Coral Harbour	0.6	0.6	0.9	0.8	2.8	0.9	0.3	0.1	0.1	0.3	0.4	0.8	0.7
Digby	0.5	0.4	0.6	0.2	5.7	0.8	0.2	0.4	0.4	0.3	0.4	0.5	0.9
Edmonton	0.5	0.4	0.4	0.5	14.4	0.6	0.3	0.4	0.5	0.4	0.8	0.5	1.6
Fredericton	0.5	0.4	0.4	0.2	6.8	0.7	0.2	0.3	0.3	0.3	0.3	0.4	0.9
Goose Bay	0.3	0.2	0.3	0.2	3.9	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.5
Greenwood	0.5	0.4	0.5	0.2	5.8	0.6	0.2	0.3	0.3	0.3	0.4	0.5	0.8
Halifax	0.4	0.4	0.5	0.2	6.1	1.9	0.3	0.3	0.4	0.3	0.4	0.3	1.0
Hay River	1.1	0.8	1.1	0.7	5.5	0.8	0.3	0.3	0.4	0.5	1.2	0.9	1.1
Inuvik	0.7	0.8	1.5	0.9	3.5	1.0	0.2	0.2	0.2	0.4	0.7	0.5	0.9
McMaster	0.8	1.0	0.7	0.4	3.6	2.8	0.6	0.6	0.7	0.8	0.9	1.0	1.2
Montreal	0.5	0.6	0.5	0.4	5.2	1.9	0.3	0.4	0.3	0.3	0.5	0.3	0.9
Moosonee	0.5	0.4	0.4	0.2	3.6	0.7	0.2	0.2	0.2	0.3	0.3	0.4	0.6
Ottawa Airport	0.4	0.4	0.4	0.3	4.8	0.6	0.3	0.4	0.3	0.4	0.4	0.5	0.8
Ottawa-BRMD*	0.4	0.5	0.5	0.4	5.2	1.7	0.5	0.5	0.3	0.3	0.5	0.5	0.9
Quebec	0.4	0.3	0.4	0.2	5.7	0.7	0.2	0.3	0.2	0.3	0.4	0.3	0.8
Regina	0.3	0.4	0.2	0.4	5.6	0.5	0.2	0.3	0.3	0.4	0.5	0.5	0.8
Resolute	0.7	0.5	0.8	0.7	2.8	0.5	0.1	0.1	0.1	0.2	0.5	0.5	0.6
Saskatoon	0.7	0.8	0.4	0.7	7.0	0.7	0.3	0.3	0.4	0.6	0.6	0.6	1.1
Sault Ste. Marie	0.5	0.7	0.5	0.4	5.4	0.8	0.4	0.4	0.5	0.5	0.5	0.7	0.9
St. John's	0.2	0.1	0.3	0.1	3.6	0.5	0.1	0.1	0.1	0.2	0.2	0.2	0.5
Thunder Bay	0.9	0.7	0.7	0.5	7.8	1.7	0.4	0.4	0.5	0.5	0.8	1.2	1.3
Toronto	0.8	0.7	0.6	0.4	4.2	1.4	0.4	0.5	0.5	0.5	0.5	0.8	1.0
Vancouver	0.2	0.2	0.2	0.3	7.8	0.4	0.1	0.2	0.3	0.2	0.2	0.2	0.8
Whitehorse	0.8	0.5	0.5	0.5	3.6	0.4	0.2	0.1	0.4	0.3	1.0	0.2	0.7
Windsor	0.6	0.4	0.5	0.5	4.8	0.9	0.5	0.6	0.5	0.5	0.6	0.6	0.9
Winnipeg	0.6	0.8	0.4	0.2	9.9	0.7	0.4	0.4	0.3	0.6	0.8	1.0	1.4
Yellowknife	0.8	0.5	0.7	0.3	4.1	0.9	0.2	0.2	0.1	0.3	0.7	0.6	0.8
National Average	0.6	0.5	0.6	0.4	5.6	0.9	0.3	0.3	0.3	0.4	0.6	0.5	0.9

*BRMD - Bureau of Radiation and Medical Devices

Table 5. Chernobyl Reactor Accident Monitoring
Surface Air Samples, Iodine-131
(Millibecquerels per cubic metre)

STATION	APRIL 24-29	APRIL 29-30	APR/MAY 30-1	MAY 1-2	MAY 2-3	MAY 3-4	MAY 4-5	MAY 5-6	MAY 6-7	MAY 7-8	MAY 8-9	MAY 9-10	MAY 10-11	MAY 11-12	MAY 12-13
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	*	1.1	7.5	17	2.8	4.0
Edmonton, Alta. Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	1.2	14	22	16	6.5
Saskatoon, Sask. Regina, Sask.	*	*	*	*	*	*	*	*	*	0.64	1.6	0.22	4.2	2.3	12
Winnipeg, Man.	*	*	*	*	*	*	*	*	0.69	0.9	0.9	0.55	0.93	3.3	7.7
Thunder Bay, Ont. Sault Ste. Marie, Ont. Moosonee, Ont.	*	*	*	*	*	*	*	*	*	1.3	0.86	*	0.93	1.6	3.7
Toronto, Ont. Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	0.24	0.68	5.3	3.8	3.4
Ottawa, (Airport) (BRMD)	*	*	*	*	*	*	*	*	*	*	2.1	7.9	3.2	5.1	4.2
Montreal, P.Q. Quebec, P.Q.	*	*	*	*	*	*	*	*	*	2.3	2.3	9.4	3.8	3.4	3.6
Fredericton, N.B.	*	*	*	*	*	*	*	*	*	*	*	16	13	3.7	2.6
Halifax, N.S. Digby, N.S. Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	2.5	12	4.4	4.4	3.3
St. John's Nfld.	*	*	*	*	*	*	*	*	*	-	-	0.43	0.4	0.66	*
Whitehorse, Y.T. Inuvik, N.W.T. Yellowknife, N.W.T. Hay River, N.W.T. Resolute, N.W.T. Coral Harbour, N.W.T. Churchill, Man. Goose Bay, Nfld.	*	*	*	*	**0.58	**2.4	*	0.36	0.21	0.42	1.9	0.92	1.6	0.81	1.4

* Less than Detection Limit of 0.024 mBq m⁻³

- No Sample

**These values were obtained on the Resolute samples only.

Table 5 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Iodine-131
(Millibecquerels per cubic metre)

STATION	MAY 13-14	MAY 14-15	MAY 15-16	MAY 16-17	MAY 17-18	MAY 18-19	MAY 19-20	MAY 20-21	MAY 21-22	MAY 22-23	MAY 23-24	MAY 24-25	MAY 25-26	MAY 26-27	MAY 27-28
Vancouver, B.C.	1.4	2.7	2.5	14	7.3	3.4	1.4	2.9	1.7	1.3	2.1	1.6	0.38	0.21	0.17
Edmonton, Alta. Calgary, Alta.	3.0	6.9	11	8.1	4.0	2.7	1.6	3.0	1.1	2.3	1.2	3.0	1.5	0.71	0.44
Saskatoon, Sask. Regina, Sask.	1.7	0.68	*	2.5	4.3	3.4	1.5	2.1	2.8	1.5	0.59	0.89	0.55	0.14	0.26
Winnipeg, Man.	16	8.8	2.0	0.36	*	0.71	7.3	4.9	3.8	3.4	1.1	1.3	-	-	1.5
Thunder Bay, Ont. Sault Ste. Marie, Ont. Moosonee, Ont.	1.3	1.5	0.7	1.1	0.31	1.3	1.5	2.8	1.3	0.74	0.97	1.2	0.39	0.49	0.63
Toronto, Ont. Windsor, Ont.	3.4	2.3	0.63	0.29	0.6	*	*	0.23	0.89	0.66	0.31	0.19	0.33	0.37	0.15
Ottawa, (Airport) (BRND)	5.2	3.0	0.82	0.27	0.32	0.17	0.11	*	*	*	*	0.42	0.70	0.72	0.36
Montreal, P.Q. Quebec, P.Q.	5.5	5.7	0.63	0.29	0.13	0.28	*	*	*	*	0.51	0.51	0.38	0.75	0.44
Fredericton, N.B.	4.8	5.5	8.6	1.3	0.28	*	*	*	0.24	*	*	0.62	0.54	0.67	0.41
Halifax, N.S. Digby, N.S. Greenwood, N.S.	4.1	3.1	3.8	2.2	0.46	*	*	0.21	0.25	0.38	*	0.11	0.31	0.16	0.33
St. John's Nfld.	3.7	3.4	3.1	1.8	1.7	0.39	0.24	1.0	1.4	0.33	0.91	0.42	0.91	*	*
Whitehorse, Y.T. Inuvik, N.W.T. Yellowknife, N.W.T. Hay River, N.W.T. Resolute, N.W.T. Coral Harbour, N.W.T. Churchill, Man. Goose Bay, Nfld.	2.0	2.8	2.0	2.1	3.0	2.5	1.9	1.5	1.3	0.099	2.5	0.63	0.93	0.13	0.077

* Less than Detection Limit of 0.024 mBq m⁻³
- No Sample

Table 5 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Iodine-131
(Millibecquerels per cubic metre)

STATION	MAY 28-29	MAY 29-30	MAY 30-31	MAY/JUNE 31-01	JUNE 01-02	JUNE 02-03	JUNE 03-04	JUNE 04-05	JUNE 05-06	JUNE 06-07	JUNE 07-08	JUNE 08-09	JUNE 09-10	JUNE 10-11	JUNE 11-12
Vancouver, B.C.	*	0.45	*			0.10						*			
Edmonton, Alta.	0.68	0.71	*			0.29						*			
Calgary, Alta.															
Saskatoon, Sask.	0.23	*	*			0.13						*			
Regina, Sask.															
Winnipeg, Man.	1.8	0.69	*			0.34						*			
Thunder Bay, Ont.															
Sault Ste. Marie, Ont.	0.17	0.11	*			0.47						0.029			
Moosonee, Ont.															
Toronto, Ont.	0.39	0.16	*			0.4						0.037			
Windsor, Ont.															
Ottawa, (Airport) (BRND)	0.38	0.35	*	0.67		0.23	0.30	0.25			0.057	*			
Montreal, P.Q. Quebec, P.Q.	0.62	0.59	*			0.42						*			
Fredericton, N.B.	*	*	*			0.43						*			
Halifax, N.S.															
Digby, N.S.	0.14	0.30	*			0.17						*			
Greenwood, N.S.															
St. John's Nfld.	*	*	*			*						*			
Whitehorse, Y.T.															
Inuvik, N.W.T.															
Yellowknife, N.W.T.															
Hay River, N.W.T.															
Resolute, N.W.T.															
Coral Harbour, N.W.T.															
Churchill, Man.	0.58	1.1	*			0.33						0.082			
Goose Bay, Nfld.															

* Less than Detection Limit of 0.024 mBq m⁻³
- No Sample

Table 5 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Iodine-131
(Millibecquerels per cubic metre)

STATION	JUNE 12-13	JUNE 13-14	JUNE 14-15	JUNE 15-16	JUNE 16-17	JUNE 17-18	JUNE 18-19	JUNE 19-20	JUNE 20-21	JUNE 21-22	JUNE 22-23	JUNE 23-24	JUNE 24-25	JUNE 25-26	JUNE 26-27
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Edmonton, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Saskatoon, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Regina, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sault Ste. Marie, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Moosonee, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Toronto, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ottawa, (Airport) (BRMO)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Montreal, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Halifax, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Digby, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Inuvik, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Yellowknife, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hay River, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Resolute, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Coral Harbour, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Churchill, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.024 mBq m⁻³
- No Sample

Table 6. Chernobyl Reactor Accident Monitoring
Surface Air Samples, Cesium-137
(Millibecquerels per cubic metre)

STATION	APRIL 24-29	APRIL 29-30	APR/MAY 30-1	MAY 1-2	MAY 2-3	MAY 3-4	MAY 4-5	MAY 5-6	MAY 6-7	MAY 7-8	MAY 8-9	MAY 9-10	MAY 10-11	MAY 11-12	MAY 12-13
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	*	0.33	4.7	11	2.1	3.0
Edmonton, Alta.	*	*	*	*	*	*	*	*	*	*	0.27	5.7	18	7.5	2.3
Calgary, Alta.	*	*	*	*	*	*	*	*	*	0.3	1.1	0.002	2.5	1.6	7.1
Saskatoon, Sask.	*	*	*	*	*	*	*	*	0.38	0.26	0.98	0.53	0.56	1.4	6.3
Regina, Sask.	*	*	*	*	*	*	*	*	*	0.61	0.69	0.045	0.56	2.5	3.8
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sault Ste. Marie, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Moosonee Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Toronto, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	0.19	0.19	3.6	2.6	2.4
Ottawa, (Airport)	*	*	*	*	*	*	*	*	*	*	0.36	4.7	1.8	0.31	2.6
Ottawa, (RRMD)	*	*	*	*	*	*	*	*	0.19	0.28	0.74	4.8	3.5	3.0	2.3
Montreal, P.Q.	*	*	*	*	*	*	*	*	0.56	0.49	0.82	13	9.2	1.3	1.5
Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	*	*	*	*	*	*	*	*	*	*	1.2	7.2	3.8	*	2.3
Halifax, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Digby, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Inuvik, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Yellowknife, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hay River, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Resolute, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Coral Harbour, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Churchill, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.043 mBq m⁻³

- No Sample

**Value for Resolute station only.

Table 6 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Cesium-137
(Millibecquerels per cubic metre)

STATION	MAY 13-14	MAY 14-15	MAY 15-16	MAY 16-17	MAY 17-18	MAY 18-19	MAY 19-20	MAY 20-21	MAY 21-22	MAY 22-23	MAY 23-24	MAY 24-25	MAY 25-26	MAY 26-27	MAY 27-28
Vancouver, B.C.	0.47	4.7	0.14	7.4	6.2	6.0	2.0	2.0	1.2	1.1	1.9	1.9	0.57	0.33	*
Edmonton, Alta. Calgary, Alta.	1.8	4.8	1.4	6.6	1.4	0.76	0.47	1.1	0.49	1.7	0.98	1.7	*	0.52	0.52
Saskatoon, Sask. Regina, Sask.	1.0	*	*	3.0	3.8	2.4	1.8	2.3	2.1	1.4	1.1	1.1	0.81	0.54	0.32
Winnipeg, Man.	8.0	0.82	*	*	0.93	4.7	6.5	4.8	3.6	3.2	1.8	1.1	-	-	1.6
Thunder Bay, Ont. Sault Ste. Marie, Ont. Moosonee, Ont.	1.9	1.9	0.90	1.1	0.35	1.4	1.0	3.0	1.2	1.4	1.9	2.7	1.0	1.3	0.99
Toronto, Ont. Windsor, Ont.	3.0	2.5	0.9	0.25	1.2	0.27	*	0.28	1.7	0.83	0.26	0.30	0.94	1.6	0.51
Ottawa, (Airport) (BRMD)	3.0	3.1	1.6	0.29	0.62	0.42	0.16	*	*	*	*	1.6	1.9	1.9	8.2
Montreal, P.Q. Quebec, P.Q.	4.0	4.0	1.3	0.78	*	0.73	*	*	*	0.19	1.0	1.3	1.4	1.8	1.4
Fredericton, N.B.	4.6	4.1	6.1	3.8	1.8	0.42	*	*	0.34	*	*	1.1	1.6	1.5	2.3
Halifax, N.S. Digby, N.S. Greenwood, N.S.	4.2	4.2	4.9	2.8	1.5	0.44	0.52	0.74	0.42	2.4	0.36	*	0.73	0.19	1.1
St. John's Nfld.	3.2	4.4	3.1	3.6	1.6	0.88	0.14	0.55	1.2	*	1.4	1.0	0.85	*	*
Whitehorse, Y.T. Inuvik, N.W.T. Yellowknife, N.W.T. Hay River, N.W.T. Resolute, N.W.T. Coral Harbour, N.W.T. Churchill, Man. Goose Bay, Nfld.	0.81	0.88	0.48	0.74	1.1	1.4	1.1	0.84	0.83	0.68	0.76	0.56	0.47	0.54	*

* Less than Detection Limit of 0.043 mBq m⁻³
- No Sample

Table 6 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Cesium-137
(Millibecquerels per cubic metre)

STATION	MAY 28-29	MAY 29-30	MAY 30-31	MAY/JUNE 31-01	JUNE 01-02	JUNE 02-03	JUNE 03-04	JUNE 04-05	JUNE 05-06	JUNE 06-07	JUNE 07-08	JUNE 08-09	JUNE 09-10	JUNE 10-11	JUNE 11-12
Vancouver, B.C.	0.31	0.80				0.21						0.091			
Edmonton, Alta. Calgary, Alta.	0.66	0.62				0.29						0.086			
Saskatoon, Sask. Regina, Sask.	0.43	0.14				0.29						0.091			
Winnipeg, Man.	1.8	0.97				0.91						*			
Thunder Bay, Ont. Sault Ste. Marie, Ont.	*	0.66				1.5						0.34			
Moosonee, Ont.															
Toronto, Ont. Windsor, Ont.	1.6 -	0.89				1.4						0.20			
Ottawa, (Airport) (BRND)	0.45	0.81				1.0	1.3	1.4				0.36 0.72			
Montreal, P.Q. Quebec, P.Q.	0.69	0.81				1.4						0.33			
Fredericton, N.B.	*	0.71				1.8						0.44			
Halifax, N.S. Digby, N.S. Greenwood, N.S.	0.98	0.11				0.64						0.26			
St. John's Nfld.	*	*				0.14						0.37			
Whitehorse, Y.T. Inuvik, N.W.T. Yellowknife, N.W.T. Hay River, N.W.T. Resolute, N.W.T. Coral Harbour, N.W.T. Churchill, Man. Goose Bay, Nfld.	0.77	0.90				0.59						0.26			

* Less than Detection Limit of 0.043 mBq m⁻³
- No Sample

Table 6 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Cesium-137
(Millibecquerels per cubic metre)

STATION	JUNE 12-13	JUNE 13-14	JUNE 14-15	JUNE 15-16	JUNE 16-17	JUNE 17-18	JUNE 18-19	JUNE 19-20	JUNE 20-21	JUNE 21-22	JUNE 22-23	JUNE 23-24	JUNE 24-25	JUNE 25-26	JUNE 26-27
Vancouver, B.C.	*	*	*	*	0.06	*	*	*	*	*	*	*	*	*	*
Edmonton, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Saskatoon, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Regina, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sault Ste. Marie, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Moosonee, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Toronto, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ottawa, (Airport) (BRND)	*	*	*	*	0.082	*	*	*	*	*	*	*	*	*	*
Montreal, P.Q.	0.2	*	*	*	0.21	*	*	*	*	*	0.15	*	*	*	*
Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	*	*	*	*	0.095	*	*	*	*	*	*	0.046	*	*	*
Halifax, N.S.	*	*	*	*	0.064	*	*	*	*	*	*	*	*	*	*
Digby, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	*	0.045	*	*	*
St. John's Nfld.	*	*	*	*	0.077	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Inuvik, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Yellowknife, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hay River, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Resolute, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Coral Harbour, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Churchill, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.043 mBq m⁻³

- No Sample

Table 7. Chernobyl Reactor Accident Monitoring
Surface Air Samples, Cesium-134
(Millibecquerels per cubic metre)

STATION	APRIL 24-29	APRIL 29-30	APR/MAY 30-1	MAY 1-2	MAY 2-3	MAY 3-4	MAY 4-5	MAY 5-6	MAY 6-7	MAY 7-8	MAY 8-9	MAY 9-10	MAY 10-11	MAY 11-12	MAY 12-13
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	0.16	0.37	2.4	6.6	1.0	1.9
Edmonton, Alta.	*	*	*	*	*	*	*	*	*	*	0.20	5.4	9.9	5.0	1.9
Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	0.67	*	1.0	0.96	4.2
Saskatoon, Sask.	*	*	*	*	*	*	*	*	*	0.32	0.85	0.23	*	0.86	3.6
Regina, Sask.	*	*	*	*	*	*	*	*	*	0.28	0.48	*	0.33	1.1	0.6
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	0.076	0.23	2.1	1.6	1.5
Thunder Bay, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	1.7	1.3	1.4
Sault Ste. Marie, Ont.	*	*	*	*	*	*	*	*	*	0.24	0.39	3.0	2.1	1.7	1.6
Moosonee Ont.	*	*	*	*	*	*	*	*	0.19	*	*	7.1	5.6	0.38	1.2
Toronto, Ont.	*	*	*	*	*	*	*	*	*	*	0.56	3.8	1.8	*	1.2
Windsor, Ont.	*	*	*	*	*	*	*	*	*	-	-	*	*	0.29	*
Ottawa, (Airport) (BRND)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Montreal, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Halifax, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Digby, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Inuvik, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Yellowknife, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hay River, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Resolute, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Coral Harbour, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Churchill, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.046 mBq m⁻³

- No Sample

**Value for Resolute station only.

Table 7 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Cesium-134
(Milibecquerels per cubic metre)

STATION	MAY 13-14	MAY 14-15	MAY 15-16	MAY 16-17	MAY 17-18	MAY 18-19	MAY 19-20	MAY 20-21	MAY 21-22	MAY 22-23	MAY 23-24	MAY 24-25	MAY 25-26	MAY 26-27	MAY 27-28
Vancouver, B.C.	0.19	0.037	*	4.6	3.5	2.4	0.6	1.4	0.94	0.78	0.96	1.1	0.26	*	*
Edmonton, Alta. Calgary, Alta.	0.42	2.5	4.0	3.5	*	0.59	0.28	0.43	0.37	0.62	0.27	1.1	0.38	0.43	0.14
Saskatoon, Sask. Regina, Sask.	*	*	*	1.6	2.4	1.2	0.77	1.3	1.2	1.0	0.65	0.46	0.33	0.44	0.24
Winnipeg, Man.	6.2	2.6	*	*	0.46	2.4	3.3	*	2.0	1.7	*	*	-	-	0.73
Thunder Bay, Ont. Sault Ste. Marie, Ont. Moosonee, Ont.	1.2	1.5	0.53	0.63	0.19	0.64	1.1	1.7	1.2	0.78	0.83	1.3	0.36	0.53	0.68
Toronto, Ont. Windsor, Ont.	1.8	1.3	0.52	*	0.73	*	*	0.069	1.0	*	0.10	*	0.43	0.61	0.37
Ottawa, (Airport) (BRMD)	1.6	1.5	0.65	0.20	*	*	*	*	*	*	*	0.7	0.89	1.1	0.51
Montreal, P.Q. Quebec, P.Q.	2.0	2.5	0.53	*	*	0.35	*	*	*	*	0.75	0.75	0.74	0.91	0.62
Fredericton, N.B.	2.6	2.4	3.2	2.3	0.82	*	*	*	*	*	*	0.55	0.74	0.89	0.84
Halifax, N.S. Digby, N.S. Greenwood, N.S.	2.6	2.5	2.1	1.6	0.83	0.36	0.20	0.44	0.38	1.5	*	*	0.27	0.31	0.63
St. John's Nfld.	2.3	1.9	1.9	1.3	1.0	0.52	0.12	0.46	0.85	0.18	0.57	0.31	0.51	*	*
Whitehorse, Y.T. Inuvik, N.W.T. Yellowknife, N.W.T. Hay River, N.W.T. Resolute, N.W.T. Coral Harbour, N.W.T. Churchill, Man. Goose Bay, Nfld.	0.57	0.57	0.20	0.41	0.59	0.68	0.53	0.44	0.48	0.4	0.37	0.29	0.27	0.24	0.27

* Less than Detection Limit of 0.046 mBq m⁻³

- No Sample

Table 7 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Cesium-134
(Millibecquerels per cubic metre)

STATION	MAY 28-29	MAY 29-30	MAY 30-31	MAY/JUNE 31-01	JUNE 01-02	JUNE 02-03	JUNE 03-04	JUNE 04-05	JUNE 05-06	JUNE 06-07	JUNE 07-08	JUNE 08-09	JUNE 09-10	JUNE 10-11	JUNE 11-12
Vancouver, B.C.	*	0.25	+	+	+	0.082	+	+	+	+	+	0.097	+	+	+
Edmonton, Alta.	0.35	0.35	+	+	+	0.086	+	+	+	+	+	*	+	+	+
Calgary, Alta.															
Saskatoon, Sask.	0.30	*	+	+	+	0.14	+	+	+	+	+	0.079	+	+	+
Regina, Sask.															
Winnipeg, Man.	1.1	0.63	+	+	+	0.42	+	+	+	+	+	0.16	+	+	+
Thunder Bay, Ont.															
Sault Ste. Marie, Ont.	0.61	0.41	+	+	+	0.77	+	+	+	+	+	0.12	+	+	+
Moosonee, Ont.															
Toronto, Ont.	0.82	0.48	+	+	+	0.58	+	+	+	+	+	0.18	+	+	+
Windsor, Ont.	-		+	+	+							0.42	+	+	+
Ottawa, (Airport) (BRMO)	0.33	0.36	+	+	+	0.48	0.52	0.55	+	+	+	0.18	+	+	+
Montreal, P.Q.	0.27	0.47	+	+	+	0.68	+	+	+	+	+	0.42	+	+	+
Quebec, P.Q.															
Fredericton, N.B.	*	0.33	+	+	+	0.81	+	+	+	+	+	0.18	+	+	+
Halifax, N.S.															
Digby, N.S.	0.58	0.52	+	+	+	0.35	+	+	+	+	+	0.14	+	+	+
Greenwood, N.S.															
St. John's Nfld.	*	*	+	+	+	*	+	+	+	+	+	0.18	+	+	+
Whitehorse, Y.T.															
Inuvik, N.W.T.															
Yellowknife, N.W.T.															
May River, N.W.T.															
Resolute, N.W.T.															
Coral Harbour, N.W.T.	0.36	0.49	+	+	+	0.35	+	+	+	+	+	0.14	+	+	+
Churchill, Man.															
Goose Bay, Nfld.															

* Less than Detection Limit of 0.046 mBq m⁻³
- No Sample

Table 7 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Cesium-134
(Millibecquerels per cubic metre)

STATION	JUNE 12-13	JUNE 13-14	JUNE 14-15	JUNE 15-16	JUNE 16-17	JUNE 17-18	JUNE 18-19	JUNE 19-20	JUNE 20-21	JUNE 21-22	JUNE 22-23	JUNE 23-24	JUNE 24-25	JUNE 25-26	JUNE 26-27
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Edmonton, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Saskatoon, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Regina, Sask.	*	*	*	*	0.072	*	*	*	*	*	*	*	*	*	*
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sault Ste. Marie, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Moosonee, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Toronto, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ottawa, (Airport) (BRND)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Montreal, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quebec, P.Q.	*	*	*	*	0.053	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Halifax, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Digby, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Inuvik, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Yellowknife, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hay River, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Resolute, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Coral Harbour, N.W.T.	*	*	*	*	0.089	*	*	*	*	*	*	*	*	*	*
Churchill, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.046 mBq m⁻³

- No Sample

Table 8. Chernobyl Reactor Accident Monitoring
Surface Air Samples, Ruthenium-103
(Millibecquerels per cubic metre)

STATION	APRIL 24-29	APRIL 29-30	APR/MAY 30-1	MAY 1-2	MAY 2-3	MAY 3-4	MAY 4-5	MAY 5-6	MAY 6-7	MAY 7-8	MAY 8-9	MAY 9-10	MAY 10-11	MAY 11-12	MAY 12-13
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	*	*	2.3	5.9	1.0	3.2
Edmonton, Alta. Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	0.34	8.4	12	7.4	3.6
Saskatoon, Sask. Regina, Sask.	*	*	*	*	*	*	*	*	*	*	0.22	*	2.7	1.9	7.3
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	0.15	0.22	0.39	2.4	7.5
Thunder Bay, Ont. Sault Ste. Marie, Ont. Moosonee, Ont.	*	*	*	*	*	*	*	*	*	0.16	*	*	0.16	0.39	0.98
Toronto, Ont. Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	0.72	1.2	0.80
Ottawa, (Airport) (BRMD)	*	*	*	*	*	*	*	*	*	*	*	1.0	0.19	0.74	0.57
Montreal, P.Q. Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	0.20	0.9	0.82	0.75	0.52
Fredericton, N.B.	*	*	*	*	*	*	*	*	*	*	*	2.1	1.8	0.28	0.18
Halifax, N.S. Digby, N.S. Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	0.29	1.2	0.73	0.43	0.61
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	-	*	*	*	*
Whitehorse, Y.T. Inuvik, N.W.T. Yellowknife, N.W.T. Hay River, N.W.T. Resolute, N.W.T. Coral Harbour, N.W.T. Churchill, Man. Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	0.26	0.19	0.5	0.12	0.34

* Less than Detection Limit of 0.028 mBq m⁻³

- No Sample

Table 8 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Ruthenium-103
(Millibecquerels per cubic metre)

STATION	MAY 13-14	MAY 14-15	MAY 15-16	MAY 16-17	MAY 17-18	MAY 18-19	MAY 19-20	MAY 20-21	MAY 21-22	MAY 22-23	MAY 23-24	MAY 24-25	MAY 25-26	MAY 26-27	MAY 27-28
Vancouver, B.C.	*	0.65	0.74	1.1	7.7	7.3	2.1	2.4	1.6	1.2	2.5	3.8	0.74	0.67	0.30
Edmonton, Alta.	0.87	3.4	5.0	5.3	2.3	*	*	1.8	0.95	2.3	1.2	2.9	1.8	1.1	0.88
Calgary, Alta.															
Saskatoon, Sask.	1.6	*	*	1.8	2.8	2.4	2.0	2.6	2.9	2.5	2.2	2.2	1.1	0.8	0.52
Regina, Sask.															
Winnipeg, Man.	9.6	5.4	1.4	*	*	3.7	6.2	5.5	6.4	5.7	2.5	1.7	-	-	1.7
Thunder Bay, Ont.															
Sault Ste. Marie, Ont.	0.77	0.5	0.75	1.2	0.34	0.77	1.8	6.6	1.8	2.0	2.5	3.3	1.2	1.7	0.29
Moosonee, Ont.															
Toronto, Ont.	1.2	2.2	0.47	0.25	1.2	*	*	0.26	4.1	2.8	0.33	0.19	1.5	1.7	0.66
Windsor, Ont.															
Ottawa, (Airport) (RPM)	1.4	1.6	0.48	0.39	0.052	0.45	0.12	*	*	*	*	2.0	2.3	2.8	1.2
Montreal, P.Q.	1.9	4.5	0.55	0.43	0.21	0.51	*	*	*	0.13	1.6	1.2	1.7	2.3	1.9
Quebec, P.Q.															
Fredericton, N.B.	0.89	2.0	3.4	1.9	1.6	0.42	*	*	0.29	0.22	*	1.6	1.5	2.0	2.7
Halifax, N.S.															
Digby, N.S.	0.73	1.1	1.9	1.9	1.2	0.36	0.44	0.59	0.53	2.1	0.26	0.12	0.66	1.5	1.4
Greenwood, N.S.															
St. John's Nfld.	*	*	1.4	2.5	1.4	0.91	0.33	0.84	1.9	0.63	1.6	1.0	4.8	*	0.84
Whitehorse, Y.T.															
Inuvik, N.W.T.															
Yellowknife, N.W.T.															
Hay River, N.W.T.															
Resolute, N.W.T.	0.29	0.31	0.21	0.48	0.85	0.97	1.0	0.81	0.80	0.89	0.78	0.7	0.49	0.62	0.42
Coral Harbour, N.W.T.															
Churchill, Man.															
Goose Bay, Nfld.															

* Less than Detection Limit of 0.028 mBq m⁻³
- No Sample

Table 8 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Ruthenium-103
(Millibecquerels per cubic metre)

STATION	MAY 28-29	MAY 29-30	MAY 30-31	MAY/JUNE 31-01	JUNE 01-02	JUNE 02-03	JUNE 03-04	JUNE 04-05	JUNE 05-06	JUNE 06-07	JUNE 07-08	JUNE 08-09	JUNE 09-10	JUNE 10-11	JUNE 11-12
Vancouver, B.C.	*	1.5				0.47						0.27			
Edmonton, Alta.															
Calgary, Alta.	1.1	1.2				0.24						0.19			
Saskatoon, Sask.	0.75	6.5													
Regina, Sask.						0.42						0.33			
Winnipeg, Man.	2.9	1.5				1.2						0.40			
Thunder Bay, Ont.															
Sault Ste. Marie, Ont.	1.5	0.91				2.8						0.56			
Moosonee, Ont.															
Toronto, Ont.	1.9	1.1				2.2						0.34			
Windsor, Ont.	-														
Ottawa, (Airport) (RPB)	1.0	0.99				1.7	2.4	1.7				0.62			
Montreal, P.Q.												1.7			0.35
Quebec, P.Q.	1.5	1.4													
Fredericton, N.B.	*	1.2				1.9						0.55			
Halifax, N.S.						2.8						0.62			
Digby, N.S.	0.88	1.5													
Greenwood, N.S.						1.1						0.43			
St. John's Nfld.	*	*				0.18						0.53			
Whitehorse, Y.T.															
Inuvik, N.W.T.															
Yellowknife, N.W.T.															
Hay River, N.W.T.															
Resolute, N.W.T.															
Coral Harbour, N.W.T.															
Churchill, Man.	0.52	0.93				0.95						0.38			
Goose Bay, Nfld.															

* Less than Detection Limit of 0.028 mBq m⁻³

- No Sample

Table 8 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Ruthenium-103
(Millibecquerels per cubic metre)

STATION	JUNE 12-13	JUNE 13-14	JUNE 14-15	JUNE 15-16	JUNE 16-17	JUNE 17-18	JUNE 18-19	JUNE 19-20	JUNE 20-21	JUNE 21-22	JUNE 22-23	JUNE 23-24	JUNE 24-25	JUNE 25-26	JUNE 26-27
Vancouver, B.C.	*	*	*	*	0.066	*	*	*	*	*	*	NO	*	*	*
Edmonton, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calgary, Alta.	*	*	*	*	0.065	*	*	*	*	*	*	*	*	*	*
Saskatoon, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Regina, Sask.	*	*	*	*	0.19	*	*	*	*	*	*	0.048	*	*	*
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay, Ont.	*	*	*	*	0.15	*	*	*	*	*	*	*	*	*	*
Sault Ste. Marie, Ont.	*	*	*	*	0.16	*	*	*	*	*	*	0.083	*	*	*
Moosonee, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Toronto, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Windsor, Ont.	*	*	*	*	0.10	*	*	*	*	*	*	0.10	*	*	*
Ottawa, (Airport) (BRMD)	*	*	*	*	0.12	*	*	*	*	*	*	0.068	*	*	*
Montreal, P.Q.	*	*	*	*	0.21	*	*	*	*	0.077	*	*	*	*	*
Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	*	*	*	*	0.13	*	*	*	*	*	*	0.050	*	*	*
Halifax, N.S.	*	*	*	*	0.075	*	*	*	*	*	*	*	*	*	*
Digby, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greenwood, N.S.	*	*	*	*	0.13	*	*	*	*	*	*	0.074	*	*	*
St. John's Nfld.	*	*	*	*	0.070	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Inuvik, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Yellowknife, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hay River, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Resolute, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Coral Harbour, N.W.T.	*	*	*	*	0.20	*	*	*	*	*	*	0.032	*	*	*
Churchill, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.028 mBq m⁻³

- No Sample

Table 9. Chernobyl Reactor Accident Monitoring
Surface Air Samples, Tellurium-132
(Millibecquerels per cubic metre)

STATION	APRIL 24-29	APRIL 29-30	APR/MAY 30-1	MAY 1-2	MAY 2-3	MAY 3-4	MAY 4-5	MAY 5-6	MAY 6-7	MAY 7-8	MAY 8-9	MAY 9-10	MAY 10-11	MAY 11-12	MAY 12-13
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	2.7	0.33	0.72
Edmonton, Alta. Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	*	3.2	3.9	0.24	0.52
Saskatoon, Sask. Regina, Sask.	*	*	*	*	*	*	*	*	*	*	0.35	*	0.88	0.35	1.6
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	0.52	1.3
Thunder Bay, Ont. Sault Ste. Marie, Ont. Moosonee, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	0.22	0.46
Toronto, Ont. Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	0.50	0.27	0.21
Ottawa, (Airport) (BRND)	*	*	*	*	*	*	*	*	*	*	*	0.73	0.31	*	0.23
Montreal, P.Q. Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	*	0.91	0.49	0.34	*
Fredericton, N.B.	*	*	*	*	*	*	*	*	*	*	*	0.18	1.2	*	*
Halifax, N.S. Digby, N.S. Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	0.28	1.2	*	*	0.20
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T. Inuvik, N.W.T. Yellowknife, N.W.T. Hay River, N.W.T. Resolute, N.W.T. Coral Harbour, N.W.T. Churchill, Man. Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	0.37	*	*	*	*

* Less than Detection Limit of 0.17 mBq m⁻³
- No Sample

Table 9 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Tellurium-132
(Millibecquerels per cubic metre)

STATION	MAY 13-14	MAY 14-15	MAY 15-16	MAY 16-17	MAY 17-18	MAY 18-19	MAY 19-20	MAY 20-21	MAY 21-22	MAY 22-23	MAY 23-24	MAY 24-25	MAY 25-26	MAY 26-27	MAY 27-28
Vancouver, B.C.	*	*	*	0.92	0.40	*	*	*	*	*	*	*	*	*	*
Edmonton, Alta. Calgary, Alta.	*	0.59	0.69	*	*	*	*	*	*	*	*	*	*	*	*
Saskatoon, Sask. Regina, Sask.	*	*	*	0.19	0.29	*	*	*	*	*	*	*	*	*	*
Winnipeg, Man.	2.1	0.58	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay, Ont. Sault Ste. Marie, Ont. Moosonee, Ont.	0.21	0.27	*	*	*	*	*	*	*	*	*	*	*	*	*
Toronto, Ont. Windsor, Ont.	0.26	0.21	*	*	*	*	*	*	*	*	*	*	*	*	*
Ottawa, (Airport) (BRND)	0.29	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Montreal, P.Q. Quebec, P.Q.	*	0.72	*	*	*	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	*	0.47	0.69	*	*	*	*	*	*	*	*	*	*	*	*
Halifax, N.S. Digby, N.S. Greenwood, N.S.	0.29	0.51	0.43	*	*	*	*	*	*	*	*	*	*	*	*
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T. Inuvik, N.W.T. Yellowknife, N.W.T. Hay River, N.W.T. Resolute, N.W.T. Coral Harbour, N.W.T. Churchill, Man. Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.17 mBq m⁻³

- No Sample

Table 9 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Tellurium-132
(Millibecquerels per cubic metre)

STATION	MAY 28-29	MAY 29-30	MAY 30-31	MAY/JUNE 31-01	JUNE 01-02	JUNE 02-03	JUNE 03-04	JUNE 04-05	JUNE 05-06	JUNE 06-07	JUNE 07-08	JUNE 08-09	JUNE 09-10	JUNE 10-11	JUNE 11-12
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Edmonton, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Saskatoon, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Regina, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sault Ste. Marie, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Moosonee, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Toronto, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ottawa, (Airport) (BOMD)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Montreal, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Halifax, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Digby, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Inuvik, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Yellowknife, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
May River, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Resolute, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Coral Harbour, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Churchill, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.17 mBq m⁻³
- No Sample

Table 9 (cont'd). Chernobyl Reactor Accident Monitoring
Surface Air Samples, Tellurium-132
(Millibecquerels per cubic metre)

STATION	JUNE 12-13	JUNE 13-14	JUNE 14-15	JUNE 15-16	JUNE 16-17	JUNE 17-18	JUNE 18-19	JUNE 19-20	JUNE 20-21	JUNE 21-22	JUNE 22-23	JUNE 23-24	JUNE 24-25	JUNE 25-26	JUNE 26-27
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Edmonton, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Saskatoon, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Regina, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Sault Ste. Marie, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Moosonee, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Toronto, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ottawa, (Airport) (BRND)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Montreal, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Halifax, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Digby, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Inuvik, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Yellowknife, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Hay River, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Resolute, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Coral Harbour, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Churchill, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.17 mBq m⁻³

- No Sample

Table 10
Chernobyl Reactor Accident Monitoring
Surface Air Samples, Non-BRMD Analyses
(Recoveries per cubic metre)

Sample Date	Location	Province	I-131	Cs-137	Cs-136	Cs-134	Ru-103	Reporting Agency	Remarks
86/05/01	BECANCOUR	QUE	0.5					SREQ	CHARCOAL, APR28-MAY01
86/05/01	CHAMPLAIN	QUE	*					SREQ	CHARCOAL, APR25-MAY01
86/05/04	DIGBY	NS	*	*				BIO	FILTER, MAY 3-4
86/05/04	DIGBY	NS	*	*				BIO	CHARCOAL, MAY 3-4
86/05/05	BECANCOUR	QUE	0.5					SREQ	CHARCOAL, MAY01-MAY05
86/05/05	CHAMPLAIN	QUE	*					SREQ	CHARCOAL, MAY 1-5
86/05/05	DIGBY	NS	*	*				BIO	CHARCOAL, MAY 4-5
86/05/05	DIGBY	NS	*	*				BIO	FILTER, MAY 4-5
86/05/05	DIPPER HARBOUR	NB	*	*				BIO	FILTER, MAY 4-5
86/05/05	DIPPER HARBOUR	NB	*	*				BIO	CHARCOAL, MAY 4-5
86/05/05	TORONTO	ONT	0.2	*	*	*	*	MOL	FILTER, R.P.LAB
86/05/06	DIPPER HARBOUR	NB	*	*				BIO	CHARCOAL, MAY 5-6
86/05/06	TORONTO	ONT	0.3	*	*	*	*	MOL	FILTER, R.P.LAB
86/05/07	DIGBY	NS	*	*				BIO	CHARCOAL, MAY 5-7
86/05/07	DIGBY	NS	*	*				BIO	FILTER, MAY 5-7
86/05/07	DIPPER HARBOUR	NB	*	*				BIO	FILTER, MAY 6-7
86/05/07	DIPPER HARBOUR	NB	*	*			*	BIO	CHARCOAL, MAY 6-7
86/05/07	FREDERICTON	NB	*	*		*	*	NREPC	CHARCOAL
86/05/07	TORONTO	ONT	0.3	*	*	*	*	MOL	FILTER, R.P.LAB
86/05/07	TORONTO	ONT	0.6	*	*	*	*	MOL	CHARCOAL, R.P.LAB
86/05/07	WHITESHELL	MAN	30.0					UNRE	
86/05/08	BECANCOUR	QUE	1.3					SREQ	CHARCOAL, MAY 5-8
86/05/08	CHAMPLAIN	QUE	2.0					SREQ	CHARCOAL, MAY 5-8
86/05/08	DIPPER HARBOUR	NB	*	*				BIO	FILTER, MAY 7-8
86/05/08	DIPPER HARBOUR	NB	*	*			*	BIO	CHARCOAL, MAY 7-8
86/05/08	FREDERICTON	NB	2.6	*	*	*	*	NREPC	CHARCOAL, MAY 7-8
86/05/08	TORONTO	ONT	0.4	0.1	*	*	*	MOL	FILTER, R.P.LAB
86/05/08	WHITESHELL	MAN	20.0					UNRE	

* Less than detection limit

See Table 1 for explanation of reporting agency abbreviations

Table 10. (cont'd)
Chernobyl Reactor Accident Monitoring
Surface Air Samples, Non-BRND Analyses
(Recoveries per cubic metre)

Sample Date	Location	Province	I-131	Cs-137	Cs-136	Cs-134	Ru-103	Reporting Agency	Remarks
86/05/09	DIGBY	NS	2.6	*		0.2	0.1	BIO	CHARCOAL, MAY 7-9
86/05/09	DIGBY	NS	1.9	0.4				BIO	FILTER, MAY 7-9
86/05/09	DIGBY	NS	4.6					BIO	TOTAL I, MAY 7-9
86/05/09	DIPPER HARBOUR	NB	3.1	*				BIO	FILTER, MAY 8-9
86/05/09	DIPPER HARBOUR	NB	1.2	*				BIO	CHARCOAL, MAY 8-9
86/05/09	DIPPER HARBOUR	NB	4.29					BIO	TOTAL I, MAY 8-9
86/05/09	FREDERICTON	NB	4.6	1.6		*	*	NBEPC	FILTER 92M3, MAY 8-9
86/05/09	FREDERICTON	NB	3.7					NBEPC	CHARCOAL
86/05/09	TORONTO	ONT	1.2	*		*	*	MOL	FILTER, R.P.LAB
86/05/09	TORONTO	ONT	2.6					MOL	CHARCOAL, R.P.LAB
86/05/09	TORONTO	ONT	4.0					MOL	CHARCOAL AFT FILTER
86/05/09	WHITESHELL	MAN	5.0					WNRE	
86/05/10	TORONTO	ONT	17.8	6.5	*	2.9	*	MOL	FILTER, R.P.LAB
86/05/10	VANCOUVER	BC	4.0					TRIUMF	CHARCOAL
86/05/10	WHITESHELL	MAN	20.0					WNRE	
86/05/11	DIGBY	NS	11.9	6.3		2.8	1.0	BIO	FILTER, MAY 9-11
86/05/11	DIGBY	NS	19.9					BIO	CHARCOAL, MAY 9-11
86/05/11	DIGBY	NS	31.8					BIO	TOTAL I, MAY 9-11
86/05/11	SASKATOON	SASK	9.3	7.3	0.5	4.3	3.3	SEC	MAY 10-11, FILTER
86/05/11	TORONTO	ONT	12.4	6.1	*	3.4	*	MOL	FILTER, R.P.LAB
86/05/11	TORONTO	ONT	16.0					MOL	CHARCOAL, R.P.LAB
86/05/11	VANCOUVER	BC	13.0					TRIUMF	CHARCOAL
86/05/11	WHITESHELL	MAN	0.1					WNRE	
86/05/12	BECANCOUR	QUE	11.2					SREG	CHARCOAL, MAY 8-12
86/05/12	CHAMPLAIN	QUE	14.8					SREG	CHARCOAL, MAY 8-12
86/05/12	DIPPER HARBOUR	NB	7.5	3.8		1.5	0.6	BIO	FILTER, MAY 9-12
86/05/12	DIPPER HARBOUR	NB	2.8					BIO	CHARCOAL, MAY 9-12
86/05/12	DIPPER HARBOUR	NB	10.3					BIO	TOTAL I, MAY 9-12
86/05/12	FREDERICTON	NB	16.0					NBEPC	CHARCOAL
86/05/12	FREDERICTON	NB	13.0	7.3		3.7	1.1	NBEPC	FILTER, MAY 9-12
86/05/12	TORONTO	ONT	14.0	5.9	0.5	3.4	2.4	MOL	FILTER, R.P.LAB
86/05/12	TORONTO	ONT	28.0					MOL	CHARCOAL, R.P.LAB
86/05/12	VANCOUVER	BC	5.0					TRIUMF	CHARCOAL
86/05/12	WHITESHELL	MAN	3.0					WNRE	
86/05/13	DIGBY	NS	4.0	1.5		0.5	0.4	BIO	FILTER, MAY 11-13
86/05/13	DIGBY	NS	7.4					BIO	CHARCOAL, MAY 11-13
86/05/13	DIGBY	NS	11.4					BIO	TOTAL I, MAY 11-13
86/05/13	FREDERICTON	NB	5.2					NBEPC	CHARCOAL
86/05/13	FREDERICTON	NB	4.5	3.0		1.0	*	NBEPC	FILTER 95M3, MAY 12-13

* Less than detection limit

See Table 1 for explanation of reporting agency abbreviations

Table 10. (cont'd)
Chernobyl Reactor Accident Monitoring
Surface Air Samples, Non-BRND Analyses
(Bequerels per cubic metre)

Sample Date	Location	Province	I-131	Cs-137	Cs-136	Cs-134	Ru-103	Reporting Agency	Remarks
86/05/13	SASKATOON	SASK	10.5	6.5	0.5	3.7	3.4	SRC	MAY 12-13
86/05/13	TORONTO	ONT	11.9	3.1	0.3	1.6	1.4	MOL	FILTER, R.P.LAB
86/05/13	TORONTO	ONT	22.0					MOL	CHARCOAL, R.P.LAB
86/05/13	VANCOUVER	BC	2.0					TRIUMF	CHARCOAL
86/05/13	WHITESHELL	MAN	20.0					UNRE	
86/05/14	BOCABEC	NB	18.0	3.1		1.4	0.7	NREPC	MAY 7-14
86/05/14	DIPPER HARBOUR	NB	6.0	3.2			0.5	BIO	FILTER, MAY 12-14
86/05/14	DIPPER HARBOUR	NB	1.6	*				BIO	CHARCOAL, MAY 12-14
86/05/14	DIPPER HARBOUR	NB	7.6					BIO	TOTAL I, MAY 12-14
86/05/14	FREDERICTON	NB	9.7	6.4		3.7	2.3	NREPC	FILTER, MAY 13-14
86/05/14	FREDERICTON	NB	7.3					NREPC	CHARCOAL
86/05/14	TORONTO	ONT	14.5					MOL	CHARCOAL, R.P.LAB
86/05/14	VANCOUVER	BC	3.0					TRIUMF	CHARCOAL
86/05/14	VICTORIA	BC	2.0						
86/05/14	WHITESHELL	MAN	20.0					UNRE	
86/05/15	BECANCOUR	QUE	23.7					SREQ	CHARCOAL, MAY 12-15
86/05/15	CHAMPLAIN	QUE	19.6					SREQ	CHARCOAL, MAY 12-15
86/05/15	DIGBY	NS	7.6	4.9		2.1	1.2	BIO	FILTER, MAY 13-15
86/05/15	DIGBY	NS	8.4					BIO	CHARCOAL, MAY 13-15
86/05/15	DIGBY	NS	16.0					BIO	TOTAL I, MAY 13-15
86/05/15	TORONTO	ONT	8.0					MOL	CHARCOAL, R.P.LAB
86/05/15	VANCOUVER	BC	1.0					TRIUMF	CHARCOAL
86/05/16	DIPPER HARBOUR	NB	3.5	2.7		1.1	0.7	BIO	FILTER, MAY 14-16
86/05/16	DIPPER HARBOUR	NB	1.2	*				BIO	CHARCOAL, MAY 14-16
86/05/16	DIPPER HARBOUR	NB	4.7					BIO	TOTAL I, MAY 14-16
86/05/16	FREDERICTON	NB	16.0	3.7		2.0	2.9	NREPC	MAY 14-16
86/05/17	DIGBY	NS	3.0	3.1	0.4	1.2	1.4	BIO	FILTER, MAY 15-17
86/05/17	DIGBY	NS	6.2	*				BIO	CHARCOAL, MAY 15-17
86/05/17	DIGBY	NS	9.2					BIO	TOTAL I, MAY 15-17
86/05/17	FREDERICTON	NB	8.2	3.4		2.0	2.5	NREPC	MAY 16-17
86/05/17	SASKATOON	SASK	2.1	3.7	0.1	2.1	1.6	SRC	MAY 16-17
86/05/17	VANCOUVER	BC	8.0					TRIUMF	CHARCOAL
86/05/18	SASKATOON	SASK	4.3	5.3	0.1	2.9	2.0	SRC	MAY 17-18
86/05/18	VANCOUVER	BC	4.0					TRIUMF	CHARCOAL
86/05/19	DIGBY	NS	*	0.7		0.3	0.6	BIO	FILTER, MAY 17-19

* Less than detection limit
See Table 1 for explanation of reporting agency abbreviations

Table 10. (cont'd)
Chernobyl Reactor Accident Monitoring
Surface Air Samples, Non-BRMD Analyses
(Becquerels per cubic metre)

Sample Date	Location	Province	I-131	Cs-137	Cs-136	Cs-134	Ru-103	Reporting Agency	Remarks
86/05/19	DIGBY	NS	2.3						
86/05/19	DIPPER HARBOUR	NB	0.3	0.8	0.1	0.6		BIO	CHARCOAL, MAY 17-19
86/05/19	DIPPER HARBOUR	NB	0.4	*				BIO	FILTER, MAY 16-19
86/05/19	DIPPER HARBOUR	NB	0.7					BIO	CHARCOAL, MAY 16-19
86/05/19	FREDERICTON	NB	3.3	0.8	0.7	0.8		BIO	TOTAL I, MAY 16-19
86/05/19	SASKATOON	SASK	3.9	4.0	0.1	2.0	2.1	NREPC	CHARCOAL, MAY 17-19
								SRC	MAY 18-19
86/05/20	BECANCOUR	QUE	4.8						
86/05/20	CHAMPLAIN	QUE	7.0					SREQ	CHARCOAL, MAY 15-20
86/05/20	FREDERICTON	NB	2.1	*	*	*	*	NREPC	CHARCOAL, MAY 15-20
86/05/20	SASKATOON	SASK	2.8	2.1	0.1	1.2	1.7	SRC	MAY 19-20
86/05/21	DIGBY	NS	*	0.6			0.8		
86/05/21	DIGBY	NS	1.5	*	0.1			BIO	FILTER, MAY 19-21
86/05/21	DIPPER HARBOUR	NB	*	*				BIO	CHARCOAL, MAY 19-21
86/05/21	DIPPER HARBOUR	NB	*	*				BIO	FILTER, MAY 19-21
86/05/21	SASKATOON	SASK	2.7	2.9	0.1	1.7	2.3	BIO	CHARCOAL, MAY 19-21
								SRC	MAY 20-21
86/05/22	FREDERICTON	NB	0.7	*	*	*	*	NREPC	MAY 20-22
86/05/23	DIGBY	NS	0.5	1.6	0.5	1.3			
86/05/23	DIGBY	NS	1.7					BIO	FILTER, MAY 21-23
86/05/23	DIGBY	NS	2.1					BIO	CHARCOAL, MAY 21-23
86/05/23	DIPPER HARBOUR	NB	*	0.4		0.4		BIO	TOTAL I, MAY 21-23
86/05/23	DIPPER HARBOUR	NB	*	*				BIO	FILTER, MAY 21-23
								BIO	CHARCOAL, MAY 21-23
86/05/25	DIGBY	NS	*	*					
86/05/25	DIGBY	NS	0.9					BIO	FILTER, MAY 23-25
								BIO	CHARCOAL, MAY 23-25
86/05/26	ROCAREC	NB	2.9	1.3	0.6	*		NREPC	MAY 14-26
86/05/26	DIPPER HARBOUR	NB	0.3	0.4	0.2	0.5		BIO	FILTER, MAY 23-26
86/05/26	DIPPER HARBOUR	NB	0.3	*				BIO	CHARCOAL, MAY 23-26
86/05/26	DIPPER HARBOUR	NB	0.6					BIO	TOTAL I, MAY 23-26
86/05/26	FREDERICTON	NB	2.6	0.9	0.4	1.1		NREPC	MAY 22-26
86/05/27	DIGBY	NS	0.5	1.1	0.3	1.2			
86/05/27	DIGBY	NS	1.4					BIO	FILTER, MAY 25-27
86/05/27	DIGBY	NS	1.9					BIO	CHARCOAL, MAY 25-27
								BIO	TOTAL I, MAY 25-27

* Less than detection limit
See Table 1 for explanation of reporting agency abbreviations

Table 10. (cont'd)
Chernobyl Reactor Accident Monitoring
Surface Air Samples, Non-BRMD Analyses
(Recoveries per cubic metre)

Sample Date	Location	Province	I-131	Cs-137	Cs-136	Cs-134	RU-103	Reporting Agency	Remarks
86/05/28	DIPPER HARBOUR	NB	*	0.7		0.1	1.0	BIO	FILTER, MAY 26-28
86/05/28	DIPPER HARBOUR	NB	*	*				BIO	CHARCOAL, MAY 26-28
86/05/29	DIGBY	NS	0.4	1.1	0.3		1.1	BIO	FILTER, MAY 27-29
86/05/29	DIGBY	NS	1.5					BIO	CHARCOAL, MAY 27-29
86/05/29	DIGBY	NS	1.9					BIO	TOTAL I, MAY 27-29
86/05/29	FREDERICTON	NB	2.3	1.2	0.6		1.4	NBEFC	MAY 26-29
86/05/30	DIPPER HARBOUR	NB	*	0.5	0.3		0.7	BIO	FILTER, MAY 28-30
86/05/30	DIPPER HARBOUR	NB	*	*				BIO	CHARCOAL MAY 28-30
86/06/02	DIGBY	NS	0.4	0.6	0.2		1.1	BIO	FILTER, MAY 29-JUN 2
86/06/02	DIGBY	NS	1.9					BIO	CHARCOAL, MAY 29-JUN 2
86/06/02	DIGBY	NS	2.3					BIO	TOTAL I, MAY 29-JUN 2
86/06/02	DIPPER HARBOUR	NB	*	1.0	0.3		1.3	BIO	FILTER, MAY 30-JUN 2
86/06/02	DIPPER HARBOUR	NB	*	*				BIO	CHARCOAL, MAY 30-JUN 2
86/06/03	FREDERICTON	NB	2.2	1.3	0.6		2.6	NBEFC	MAY 29-JUNE 3
86/06/04	DIGBY	NS	0.6	1.1	0.4		1.8	BIO	FILTER, JUNE 2-4
86/06/04	DIGBY	NS	1.2					BIO	CHARCOAL, JUNE 2-4
86/06/04	DIGBY	NS	1.7					BIO	TOTAL I, JUNE 2-4
86/06/04	DIPPER HARBOUR	NB	0.6	1.8	0.6		2.8	BIO	FILTER, JUNE 2-4
86/06/04	DIPPER HARBOUR	NB	*	*				BIO	CHARCOAL, JUNE 2-4
86/06/05	FREDERICTON	NB	1.2	2.3	*		2.7	NBEFC	JUNE 3-5
86/06/06	DIGBY	NS	0.4	1.4	0.4		2.3	BIO	FILTER, JUNE 4-6
86/06/06	DIGBY	NS	0.7					BIO	CHARCOAL, JUNE 4-6
86/06/06	DIGBY	NS	1.2					BIO	TOTAL I, JUNE 4-6
86/06/06	DIPPER HARBOUR	NB	0.3	1.8	0.7		3.1	BIO	FILTER, JUNE 4-6
86/06/06	DIPPER HARBOUR	NB	0.2	*				BIO	CHARCOAL, JUNE 4-6
86/06/06	DIPPER HARBOUR	NB	0.5					BIO	TOTAL I, JUNE 4-6
86/06/11	BOCABEC	NB	1.0	0.9	0.4		1.6	NBEFC	MAY 26-JUNE 11
86/06/20	DIGBY	NS	*	*	*		*	BIO	FILTER, JUNE 18-20
86/06/20	DIGBY	NS	*	*				BIO	CHARCOAL, JUNE 18-20

* Less than detection limit

See Table 1 for explanation of reporting agency abbreviations

Table 10. (cont'd)
Chernobyl Reactor Accident Monitoring
Surface Air Samples, Non-BRND Analyses
(Becquerels per cubic metre)

Sample Date	Location	Province	I-131	Cs-137	Cs-136	Cs-134	Ru-103	Reporting Agency	Remarks
86/06/22	DIGBY	NS	*	*	*	*	*	BIO	FILTER, JUNE 20-22
86/06/22	DIGBY	NS	*	*	*	*	*	BIO	CHARCOAL, JUNE 20-22
86/06/24	BOCABEC	NB	*	*	*	*	0.2	NBEPIC	JUNE 11-24
86/06/25	DIGBY	NS	*	*	*	*	*	BIO	FILTER, JUNE 22-25
86/06/25	DIGBY	NS	*	*	*	*	*	BIO	CHARCOAL, JUNE 22-25
86/06/25	DIPPER HARBOUR	NB	*	*	*	*	*	BIO	FILTER, JUNE 23-25
86/06/25	DIPPER HARBOUR	NB	*	*	*	*	*	BIO	CHARCOAL, JUNE 23-25
86/06/27	DIGBY	NS	*	*	*	*	*	BIO	FILTER, JUNE 25-27
86/06/27	DIGBY	NS	*	*	*	*	*	BIO	CHARCOAL, JUNE 25-27
86/06/27	DIPPER HARBOUR	NB	*	*	*	*	*	BIO	FILTER, JUNE 25-27
86/06/27	DIPPER HARBOUR	NB	*	*	*	*	*	BIO	CHARCOAL, JUNE 25-27

* Less than detection limit

See Table 1 for explanation of reporting agency abbreviations

Table 11. Gross Beta Activity in the
Canadian Precipitation Monitoring Network 1986

(Becquerels per square metre)

Station	Total No. of Samples	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Total Annual Deposition
Calgary	12	21	111	36	10	178
Churchill	12	35	83	38	18	173
Coral Harbour	12	39	59	27	17	141
Digby	12	75	205	56	23	359
Edmonton	12	42	289	51	27	409
Fredericton	12	42	168	38	28	275
Goose Bay	12	103	150	38	35	326
Greenwood	12	51	163	53	48	315
Halifax	12	27	51	35	37	148
Hay River	12	48	223	40	26	337
Inuvik	12	40	120	20	41	220
Montreal	12	48	245	54	36	382
Moosonee	12	50	84	67	45	246
Ottawa - Airport	12	23	132	48	46	249
Ottawa - BRMD**	12	30	191	37	31	289
Quebec	12	36	310	73	30	450
Regina	12	49	170	42	24	285
Resolute	12	20	54	22	12	107
Saskatoon	12	23	151	40	35	249
Sault Ste. Marie	12	20	147	50	47	264
St. John's	12	42	181	33	68	324
Thunder Bay	12	21	96	48	66	230
Toronto	12	51	124	87	57	319
Vancouver	12	35	322	15	52	424
Whitehorse	12	34	144	26	11	215
Windsor	12	29	175	46	37	287
Winnipeg	12	19	169	151	34	273
Yellowknife	12	19	139	26	31	214
National Average						265

** B.R.M.D. = Bureau of Radiation and Medical Devices

Table 12. Chernobyl Reactor Accident Monitoring
Precipitation, Iodine-131 Concentration
(Becquerels per litre)

STATION	APRIL 24-29	APRIL 29-30	APR/MAY 30-1	MAY 1-2	MAY 2-3	MAY 3-4	MAY 4-5	MAY 5-6	MAY 6-7	MAY 7-8	MAY 8-9	MAY 9-10	MAY 10-11
Vancouver, B.C.				+	+	+	+	+	+	+	+	+	+
Terrace, B.C.				+	+	+	+	+	+	+	+	+	+
Prince George, B.C.				+	+	+	+	+	+	+	+	+	+
Revelstoke, B.C.				+	+	+	+	+	+	+	+	+	+
Edmonton, Alta.				+	+	+	+	+	+	+	+	+	+
Calgary, Alta.				+	+	+	+	+	+	+	+	+	+
Saskatoon, Sask.				+	+	+	+	+	+	+	+	+	+
Regina, Sask.				+	+	+	+	+	+	+	+	+	+
Winnipeg, Man.				+	+	+	+	+	+	+	+	+	+
Thunder Bay, Ont.				+	+	+	+	+	+	+	+	+	+
Sault Ste. Marie, Ont.				+	+	+	+	+	+	+	+	+	+
Moosonee, Ont.				+	+	+	+	+	+	+	+	+	+
Toronto, Ont.				+	+	+	+	+	+	+	+	+	+
Windsor, Ont.				+	+	+	+	+	+	+	+	+	+
Ottawa, (Airport) (BRMD)				+	+	+	+	+	+	+	+	+	+
Montreal, P.Q.				+	+	+	+	+	+	+	+	+	+
Quebec, P.Q.				+	+	+	+	+	+	+	+	+	+
Fredericton, N.B.				+	+	+	+	+	+	+	+	+	+
Halifax, N.S.				+	+	+	+	+	+	+	+	+	+
Digby, N.S.				+	+	+	+	+	+	+	+	+	+
Greenwood, N.S.				+	+	+	+	+	+	+	+	+	+
St. John's Nfld.				+	+	+	+	+	+	+	+	+	+
Whitehorse, Y.T.				+	+	+	+	+	+	+	+	+	+
Inuvik, N.W.T.				+	+	+	+	+	+	+	+	+	+
Yellowknife, N.W.T.				+	+	+	+	+	+	+	+	+	+
Hay River, N.W.T.				+	+	+	+	+	+	+	+	+	+
Resolute, N.W.T.				+	+	+	+	+	+	+	+	+	+
Coral Harbour, N.W.T.				+	+	+	+	+	+	+	+	+	+
Churchill, Man.				+	+	+	+	+	+	+	+	+	+
Goose Bay, Nfld.				+	+	+	+	+	+	+	+	+	+

* Less than Detection Limit of 0.59 Bq L⁻¹
- No Sample

Table 12 (cont'd). Chernobyl Reactor Accident Monitoring
Precipitation, Iodine-131 Concentration
(Becquerels per litre)

STATION	MAY 11-12	MAY 12-13	MAY 13-14	MAY 14-15	MAY 15-16	MAY 16-17	MAY 17-18	MAY 18-19	MAY 19-20	MAY 20-21	MAY 21-22	MAY 22-23	MAY 23-24	
Vancouver, B.C. Terrace, B.C. Prince George, B.C. Revelstoke, B.C.	68 11	28 9 10 18	7	9	4	19 2 8 5	12 8 3	7	8 ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....	..... ..... ..... .....	2	
Edmonton, Alta. Calgary, Alta.	18	-	5 4	 9 .....	- ..... .....	..... ..... .....	..... ..... .....	4 ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	
Saskatoon, Sask. Regina, Sask.	..... .....	..... .....	..... .....	3 4 .....	- ..... .....	..... ..... .....	..... ..... .....	5 ..... .....	..... ..... .....	..... ..... .....	- ..... .....	1 ..... .....	..... ..... .....	
Winnipeg, Man.	.....	.....	.....	13 .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Thunder Bay, Ont. Sault Ste. Marie, Ont. Moosonee, Ont.	..... ..... .....	..... ..... .....	5 ..... .....	..... ..... .....	2 ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	
Toronto, Ont. Windsor, Ont.	..... .....	..... .....	..... .....	..... .....	3 .....	..... .....	0.7 .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	
Ottawa, (Airport) (BRMD)	.....	.....	.....	2	6 .....	..... .....	..... .....	0.9 0.8	..... .....	..... .....	- .....	0.6 0.7	..... .....	
Montreal, P.Q. Quebec, P.Q.	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	1 .....	..... .....	..... .....	..... .....	..... .....	..... .....	..... .....	
Fredericton, N.B.	.....	.....	.....	.....	.....	21 .....	.....	.....	.....	.....	.....	.....	.....	
Halifax, N.S. Digby, N.S. Greenwood, N.S.	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	5 ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	..... ..... .....	
St. John's Nfld.	.....	.....	.....	.....	.....	.....	.....	.....	.....	2 .....	.....	.....	.....	
Whitehorse, Y.T. Inuvik, N.W.T. Yellowknife, N.W.T. Hay River, N.W.T. Resolute, N.W.T. Coral Harbour, N.W.T. Churchill, Man. Goose Bay, Nfld.	17	*	14 66											

* Less than Detection Limit of 0.59 Bq L⁻¹
- No Sample

Table 12 (cont'd). Chernobyl Reactor Accident Monitoring
Precipitation, Iodine-131 Concentration
(Becquerels per litre)

STATION	MAY 24-25	MAY 25-26	MAY 26-27	MAY 27-28	MAY 28-29	MAY 29-30	MAY 30-31	MAY/JUNE 31-01	JUNE 01-02	JUNE 02-03	JUNE 03-04	JUNE 04-05	JUNE 05-06
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Terrace, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Prince George, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Revelstoke, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Edmonton, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*
Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*
Saskatoon, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*
Regina, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Sault Ste. Marie, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Moosonee, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Toronto, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Ottawa, (Airport)	*	*	*	*	*	*	*	*	*	*	*	*	*
Montreal, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*
Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	*	*	*	*	*	*	*	*	*	*	*	*	*
Halifax, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*
Digby, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*
Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Inuvik, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Yellowknife, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
May River, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Resolute, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Coral Harbour, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Churchill, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*
Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.59 Bq L⁻¹
- No Sample

Table 12 (cont'd). Chernobyl Reactor Accident Monitoring
Precipitation, Iodine-131 Concentration
(Becquerels per litre)

STATION	JUNE 06-07	JUNE 07-08	JUNE 08-09	JUNE 09-10	JUNE 10-11	JUNE 11-12	JUNE 12-13	JUNE 13-14	JUNE 14-15	JUNE 15-16	JUNE 16-17	JUNE 17-18	JUNE 18-19
Vancouver, B.C.													
Terrace, B.C.													
Prince George, B.C.													
Revelstoke, B.C.													
Edmonton, Alta.													
Calgary, Alta.													
Saskatoon, Sask.													
Regina, Sask.													
Winnipeg, Man.													
Thunder Bay, Ont.													
Sault Ste. Marie, Ont.													
Moosonee, Ont.													
Toronto, Ont.													
Windsor, Ont.													
Ottawa, (Airport) (BRMD)													
Montreal, P.Q.													
Quebec, P.Q.													
Fredericton, N.B.													
Halifax, N.S.													
Digby, N.S.													
Greenwood, N.S.													
St. John's Nfld.													
Whitehorse, Y.T.													
Inuvik, N.W.T.													
Yellowknife, N.W.T.													
Hay River, N.W.T.													
Resolute, N.W.T.													
Coral Harbour, N.W.T.													
Churchill, Man.													
Goose Bay, Nfld.													

* Less than Detection Limit of 0.59 Bq L⁻¹

- No Sample

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Table 12 (cont'd). Chernobyl Reactor Accident Monitoring
Precipitation, Iodine-131 Concentration
(Becquerels per litre)

STATION	JUNE 19-20	JUNE 20-21	JUNE 21-22	JUNE 22-23	JUNE 23-24	JUNE 24-25	JUNE 25-26	JUNE 26-27	JUNE 27-28	JUNE 28-29	JUNE 29-30	JUN/JULY 30-1	JULY 1-2
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Terrace, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Prince George, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Revelstoke, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Edmonton, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*
Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*
Saskatoon, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*
Regina, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Sault Ste. Marie, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Mooseonee, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Ottawa, (Airport) (BRND)	*	*	*	*	*	*	*	*	*	*	*	*	*
Montreal, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*
Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	*	*	*	*	*	*	*	*	*	*	*	*	*
Halifax, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*
Digby, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*
Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Inuvik, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Yellowknife, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Hay River, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Resolute, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Coral Harbour, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Churchill, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*
Goose Bay, Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.59 Bq L⁻¹

- No Sample

* Less than Detection Limit of 0.59 Bq L-1
- No Sample

* Less than
- No Sample

Table 13. Chernobyl Reactor Accident Monitoring
Precipitation, Iodine-131 Deposition
(Becquerels per cubic metre)

STATION	APRIL 24-29	APRIL 29-30	APR/MAY 30-1	MAY 1-2	MAY 2-3	MAY 3-4	MAY 4-5	MAY 5-6	MAY 6-7	MAY 7-8	MAY 8-9	MAY 9-10	MAY 10-11
Vancouver, B.C.				+	+	+	+	+	+	+	+	+	+
Terrace, B.C.				+	+	+	+	+	+	+	+	+	+
Prince George, B.C.				+	+	+	+	+	+	+	+	+	+
Revelstoke, B.C.				+	+	+	+	+	+	+	+	+	18
Edmonton, Alta.				+	+	+	+	+	+	+	+	+	+
Calgary, Alta.				+	+	+	+	+	+	+	+	+	+
Saskatoon, Sask.				+	+	+	+	+	+	+	+	+	+
Regina, Sask.				+	+	+	+	+	+	+	+	+	+
Winnipeg, Man.				+	+	+	+	+	+	+	+	+	+
Thunder Bay, Ont.				+	+	+	+	+	+	+	+	+	+
Sault Ste. Marie, Ont.				+	+	+	+	+	+	+	+	+	+
Moosonee, Ont.				+	+	+	+	+	+	+	+	+	+
Toronto, Ont.				+	+	+	+	+	+	+	+	+	+
Windsor, Ont.				+	+	+	+	+	+	+	+	+	+
Ottawa, (Airport) (BRMD)				+	+	+	+	+	+	+	+	+	+
Montreal, P.Q.				+	+	+	+	+	+	+	+	+	+
Quebec, P.Q.				+	+	+	+	+	+	+	+	+	+
Fredericton, N.B.				+	+	+	+	+	+	+	+	+	+
Halifax, N.S.				+	+	+	+	+	+	+	+	+	+
Digby, N.S.				+	+	+	+	+	+	+	+	+	+
Greenwood, N.S.				+	+	+	+	+	+	+	+	+	+
St. John's Nfld.				+	+	+	+	+	+	+	+	+	+
Whitehorse, Y.T.				+	+	+	+	+	+	+	+	+	+
Inuvik, N.W.T.				+	+	+	+	+	+	+	+	+	+
Yellowknife, N.W.T.				+	+	+	+	+	+	+	+	+	+
Hay River, N.W.T.				+	+	+	+	+	+	+	+	+	+
Resolute, N.W.T.				+	+	+	+	+	+	+	+	+	+
Coral Harbour, N.W.T.				+	+	+	+	+	+	+	+	+	+
Churchill, Man.				+	+	+	+	+	+	+	+	+	+
Goose Bay, Nfld.				+	+	+	+	+	+	+	+	+	+

* Less than Detection Limit of 6.7 Bq m⁻²
- No Sample

Table 13 (cont'd). Chernobyl Reactor Accident Monitoring
Precipitation, Iodine-131 Deposition
(Becquerels per cubic metre)

STATION	MAY 11-12	MAY 12-13	MAY 13-14	MAY 14-15	MAY 15-16	MAY 16-17	MAY 17-18	MAY 18-19	MAY 19-20	MAY 20-21	MAY 21-22	MAY 22-23	MAY 23-24
Vancouver, B.C.	30	37											
Terrace, B.C.	86	7											
Prince George, B.C.		24											
Revelstoke, B.C.		251											7
Edmonton, Alta.	45		37										
Calgary, Alta.			39	13									
Saskatoon, Sask.													
Regina, Sask.				8									
Winnipeg, Man.													
Thunder Bay, Ont.			64										
Sault Ste. Marie, Ont.													
Moosonee, Ont.													
Toronto, Ont.													
Windsor, Ont.													
Ottawa, (Airport) (BRND)													
Montreal, P.Q.													
Quebec, P.Q.													
Fredericton, N.B.													
Halifax, N.S.													
Digby, N.S.													
Greenwood, N.S.													
St. John's Nfld.													
Whitehorse, Y.T.													
Inuvik, N.W.T.	9	*	16										
Yellowknife, N.W.T.													
May River, N.W.T.			9										
Resolute, N.W.T.													
Coral Harbour, N.W.T.													
Churchill, Man.													
Goose Bay, Nfld.													

* Less than Detection Limit of 6.7 Bqm-2
- No Sample

Table 13 (cont'd). Chernobyl Reactor Accident Monitoring
Precipitation, Iodine-131 Deposition
(Becquerels per cubic metre)

STATION	MAY 24-25	MAY 25-26	MAY 26-27	MAY 27-28	MAY 28-29	MAY 29-30	MAY 30-31	MAY/JUNE 31-01	JUNE 01-02	JUNE 02-03	JUNE 03-04	JUNE 04-05	JUNE 05-06
Vancouver, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Terrace, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Prince George, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Revelstoke, B.C.	*	*	*	*	*	*	*	*	*	*	*	*	*
Edmonton, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*
Calgary, Alta.	*	*	*	*	*	*	*	*	*	*	*	*	*
Saskatoon, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*
Regina, Sask.	*	*	*	*	*	*	*	*	*	*	*	*	*
Winnipeg, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*
Thunder Bay, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Sault Ste. Marie, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Moosonee, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Toronto, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Windsor, Ont.	*	*	*	*	*	*	*	*	*	*	*	*	*
Ottawa, (Airport) (BRM)	16	*	*	*	*	*	*	*	*	*	*	*	*
Montreal, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*
Quebec, P.Q.	*	*	*	*	*	*	*	*	*	*	*	*	*
Fredericton, N.B.	49	*	*	*	*	*	*	*	*	*	*	*	*
Halifax, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*
Digby, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*
Greenwood, N.S.	*	*	*	*	*	*	*	*	*	*	*	*	*
St. John's Nfld.	*	*	*	*	*	*	*	*	*	*	*	*	*
Whitehorse, Y.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Inuvik, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Yellowknife, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Hay River, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Resolute, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Coral Harbour, N.W.T.	*	*	*	*	*	*	*	*	*	*	*	*	*
Churchill, Man.	*	*	*	*	*	*	*	*	*	*	*	*	*
Goose Bay, Nfld.	19	*	*	*	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 6.7 Bq m⁻²
- No Sample

Table 13 (cont'd). Chernobyl Reactor Accident Monitoring
Precipitation, Iodine-131 Deposition
(Becquerels per cubic metre)

STATION	JUNE 06-07	JUNE 07-08	JUNE 08-09	JUNE 09-10	JUNE 10-11	JUNE 11-12	JUNE 12-13	JUNE 13-14	JUNE 14-15	JUNE 15-16	JUNE 16-17	JUN/JULY 17-18	JULY 18-19
Vancouver, B.C.	+	+	+	+	+	+	+	+	+	+	+	+	+
Terrace, B.C.	+	+	+	+	+	+	+	+	+	+	+	+	+
Prince George, B.C.	+	+	+	+	+	+	+	+	+	+	+	+	+
Revelstoke, B.C.	+	+	+	+	+	+	+	+	+	+	+	+	+
Edmonton, Alta.	+	+	+	+	+	+	+	+	+	+	+	+	+
Calgary, Alta.	+	+	+	+	+	+	+	+	+	+	+	+	+
Saskatoon, Sask.	+	+	+	+	+	+	+	+	+	+	+	+	+
Regina, Sask.	+	+	+	+	+	+	+	+	+	+	+	+	+
Winnipeg, Man.	+	+	+	+	+	+	+	+	+	+	+	+	+
Thunder Bay, Ont.	+	+	+	+	+	+	+	+	+	+	+	+	+
Sault Ste. Marie, Ont.	+	+	+	+	+	+	+	+	+	+	+	+	+
Moosonee, Ont.	+	+	+	+	+	+	+	+	+	+	+	+	+
Toronto, Ont.	+	+	+	+	+	+	+	+	+	+	+	+	+
Windsor, Ont.	+	+	+	+	+	+	+	+	+	+	+	+	+
Ottawa, (Airport) (BRMD)	+	+	+	+	+	+	+	+	+	+	+	+	+
Montreal, P.Q.	+	+	+	+	+	+	+	+	+	+	+	+	+
Quebec, P.Q.	+	+	+	+	+	+	+	+	+	+	+	+	+
Fredericton, N.B.	+	+	+	+	+	+	+	+	+	+	+	+	+
Halifax, N.S.	+	+	+	+	+	+	+	+	+	+	+	+	+
Digby, N.S.	+	+	+	+	+	+	+	+	+	+	+	+	+
Greenwood, N.S.	+	+	+	+	+	+	+	+	+	+	+	+	+
St. John's, Nfld.	+	+	+	+	+	+	+	+	+	+	+	+	+
Whitehorse, Y.T.	+	+	+	+	+	+	+	+	+	+	+	+	+
Inuvik, N.W.T.	+	+	+	+	+	+	+	+	+	+	+	+	+
Yellowknife, N.W.T.	+	+	+	+	+	+	+	+	+	+	+	+	+
Hay River, N.W.T.	+	+	+	+	+	+	+	+	+	+	+	+	+
Resolute, N.W.T.	+	+	+	+	+	+	+	+	+	+	+	+	+
Coral Harbour, N.W.T.	+	+	+	+	+	+	+	+	+	+	+	+	+
Churchill, Man.	+	+	+	+	+	+	+	+	+	+	+	+	+
Goose Bay, Nfld.	+	+	+	+	+	+	+	+	+	+	+	+	+

* Less than Detection Limit of 6.7 Bq m⁻²
- No Sample

Table 13 (cont'd). Chernobyl Reactor Accident Monitoring
Precipitation, Iodine-131 Deposition
(Becquerels per cubic metre)

STATION	JUNE 19-20	JUNE 20-21	JUNE 21-22	JUNE 22-23	JUNE 23-24	JUNE 24-25	JUNE 25-26	JUNE 26-27	JUNE 27-28	JUNE 28-29	JUNE 29-30	JUN/JULY 30-01	JULY 01-02
Vancouver, B.C.													
Terrace, B.C.													
Prince George, B.C.													
Revelstoke, B.C.													
Edmonton, Alta.													
Calgary, Alta.													
Saskatoon, Sask.													
Regina, Sask.													
Winnipeg, Man.													
Thunder Bay, Ont.													
Sault Ste. Marie, Ont.													
Moosonee, Ont.													
Toronto, Ont.													
Windsor, Ont.													
Ottawa, (Airport) (BRMD)													
Montreal, P.Q.													
Quebec, P.Q.													
Fredericton, N.B.													
Halifax, N.S.													
Digby, N.S.													
Greenwood, N.S.													
St. John's, Nfld.													
Whitehorse, Y.T.													
Inuvik, N.W.T.													
Yellowknife, N.W.T.													
Hay River, N.W.T.													
Resolute, N.W.T.													
Coral Harbour, N.W.T.													
Churchill, Man.													
Goose Bay, Nfld.													

* Less than Detection Limit of 6.7 Bqm⁻²
- No Sample

Table 13 (cont'd). Chernobyl Reactor Accident Monitoring

STATION	JULY 2-3	JULY 3-4
Vancouver, B.C.	>	>
Terrace, B.C.	>	>
Prince George, B.C.	>	>
Revelstoke, B.C.	>	>
Edmonton, Alta.	>	>
Calgary, Alta.	>	>
Saskatoon, Sask.	>	>
Regina, Sask.	>	>
Winnipeg, Man.	>	>
Thunder Bay, Ont.	>	>
Sault Ste. Marie, Ont.	>	>
Moosonee, Ont.	>	>
Toronto, Ont.	>	>
Windsor, Ont.	>	>
Ottawa, (Airport)	>	>
(BRMD)	>	>
Montreal, P.Q.	>	>
Quebec, P.Q.	>	>
Fredericton, N.B.	>	>
Halifax, N.S.	>	>
Digby, M.S.	>	>
Greenwood, N.S.	>	>
St. John's, Nfld.	>	>
Whitehorse, Y.T.	>	>
Inuvik, N.W.T.	>	>
Yellowknife, N.W.T.	>	>
Hay River, N.W.T.	>	>
Resolute, N.W.T.	>	>
Coral Harbour, N.W.T.	>	>
Churchill, Man.	>	>
Goose Bay, Nfld.	>	>

* Less than Detection Limit of 6.7 Bqm⁻²

- No Sample

Table 14
Chernobyl Reactor Accident Monitoring
Precipitation, Radionuclide Deposition in May 1986
(Becquerels per square metre)

Sampling Station	I-131	Sr-89	Sr-90	Cs-137	Cs-134	Ru-103	Gross Beta
Calgary	105	5.2	.68	15	4.7	12	22
Churchill	222	3.9	.68	-	6.2	32	-
Coral Harbour	33	*	.77	25	7.1	20	34
Digby	13	3.6	.32	31	14	15	73
Edmonton	141	16	.78	56	24	64	140
Fredericton	69	3.5	.23	21	6.2	20	63
Goose Bay	64	4.1	.21	33	10	45	59
Greenwood	26	*	*	27	9.0	35	47
Halifax	85	*	.61	13	6.8	11	41
Hay River	68	6.1	.68	67	24	78	154
Inuvik	38	*	*	14	7.1	11	51
Montreal	44	5.0	.65	30	15	40	109
Moosonee	20	*	*	3.4	*	3.7	12
Ottawa - Airport	68	3.0	.41	20	10	22	44
Ottawa - BRMD**	109	3.7	.63	35	14	24	152
Prince George	82	*	*	14	7.7	7.5	28
Quebec	229	4.2	.70	34	15	28	94
Regina	149	8.5	.53	49	22	69	93
Resolute	*	*	*	14	4.8	5.8	10
Revelstoke	328	1.4	.18	8.5	3.9	16	46
Saskatoon	187	*	*	20	9.0	18	53
Sault Ste. Marie	*	*	*	22	11	15	41
St. John's	16	*	.34	17	8.3	7.3	55
Terrace	130	.75	.33	4.6	*	11	26
Thunder Bay	77	2.2	.42	10	6.3	10	30
Toronto	32	*	*	8.3	3.1	12	39
Vancouver	404	8.4	1.3	56	26	84	150
Whitehorse	60	*	1.5	16	6.5	23	77
Windsor	*	*	*	14	5.2	11	72
Winnipeg	43	*	*	27	10	31	55
Yellowknife	9	*	*	21	9.7	31	77

- No Sample

* Less than the detection limit

Detection limit: Sr-89 and Sr-90 = 0.17 Bq m⁻²

I-131 = 6.7 Bq m⁻²

Cs-134 = 3.9 Bq m⁻²

** Bureau of Radiation and Medical Devices

Table 15
Chernobyl Reactor Accident Monitoring
Precipitation, Radionuclide Deposition in June 1986
(Becquerels per square metre)

Sampling Station	I-131	Cs-137	Cs-134	Gross Beta Radioactivity
Calgary	*	13	7.1	62
Churchill	18	22	7.5	83
Coral Harbour	*	6.2	3.6	28
Digby	14	9.2	*	70
Edmonton	*	9.2	*	56
Fredericton	*	6.9	*	67
Goose Bay	*	13	8.4	48
Greenwood	*	*	*	55
Halifax	*	*	*	44
Hay River	*	21	9.9	58
Inuvik	*	15	7.1	49
Montreal	*	17	9.9	100
Moosonee	*	15	8.2	57
Ottawa - Airport	*	8	5.2	60
Ottawa - BRMD**	*	*	*	66
Quebec	14	*	*	16
Regina	*	*	*	44
Resolute	8	16	7.7	44
Saskatoon	*	7.8	2.8	57
Sault Ste. Marie	*	*	*	85
St. John's	*	15	-	101
Thunder Bay	*	*	*	56
Toronto	*	15	-	52
Vancouver	*	*	*	91
Whitehorse	*	9.2	7.8	42
Windsor	*	18	7.5	86
Winnipeg	*	20	9.4	90
Yellowknife	*	17	8.1	54

- No Sample

* Less than detection limit

Detection Limits: I-131 - 6.7 Bq m⁻²
Cs-137 - 3.7 Bq m⁻²
Cs-134 - 3.9 Bq m⁻²

** Bureau of Radiation and Medical Devices

Table 16
Chernobyl Reactor Accident Monitoring
Radionuclides in Precipitation, Non-BRAD Analyses
(Becquerels per litre)

Sample Date	Location	Province	I-131	Cs-137	Reporting Agency	Remarks
86/05/10	MEAGHER CREEK	BC	10.0		TRIUMF	FRESH SNOW
86/05/10	SASKATOON	SASK	51.6	0.4	SRC	MAY 9-10
86/05/10	VICTORIA	BC	10.0		U OF V	
86/05/11	EDMONTON	ALTA	28.9		U OF A	
86/05/11	HALIFAX	NS	17.9	*	BIO	ARMDALE, 2200h
86/05/11	HALIFAX	NS	81.0	*	BIO	HERRING COVE, 1800h
86/05/11	HALIFAX	NS	24.4	*	BIO	LOWER SACKVILLE, 2200
86/05/11	SASKATOON	SASK	8.0		SRC	MAY 10-11
86/05/11	VANCOUVER	BC	50.0		RPS	WHITE ROCK
86/05/11	VANCOUVER	BC	49.6	*	RPS	
86/05/12	EDMONTON	ALTA	5.0		U OF A	
86/05/12	HALIFAX	NS	36.2	0.7	BIO	COLE HARBOUR, 0300h
86/05/12	HALIFAX	NS	12.4	0.3	BIO	DARTMOUTH, 1005h
86/05/12	SASKATOON	SASK	6.7		SRC	MAY 11-12
86/05/12	VANCOUVER	BC	5.0		RPS	WHITE ROCK
86/05/12	VANCOUVER	BC	5.1	*	RPS	MAY 5-12
86/05/12	VANCOUVER	BC	40.0		TRIUMF	
86/05/12	VICTORIA	BC	5.0		U OF V	
86/05/12	WHITESHELL	MAN	9.5		WNRE	MAY 9-12
86/05/13	HALIFAX	NS	9.3	*	BIO	HACKETTS COVE, 0330h
86/05/13	HAMPTON	NB	*		NBEPC	
86/05/14	EDMONTON	ALTA	*		U OF A	
86/05/15	SASKATOON	SASK	4.1		SRC	MAY 14-15
86/05/15	TORONTO	ONT	3.8		MOL	ETOBICOKE
86/05/15	TORONTO	ONT	3.6		MOL	BRAMPTON
86/05/16	BLACK HARBOUR	NB	*		NBEPC	
86/05/16	GABRIOLE ISL.	BC	*	*	RPS	
86/05/16	KARS	ONT	*	*	BRMD	MAY 14-16
86/05/16	TORONTO	ONT	0.4		MOL	

* Less than detection limit
See Table 1 for explanation of reporting agency abbreviations

Table 16. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclides in Precipitation, Non-BRND Analyses
(Becquerels per litre)

Sample Date	Location	Province	I-131	Cs-137	Reporting Agency	Remarks
86/05/17	FREDERICTON	NB	2.4		NBEP	1210h
86/05/17	HALIFAX	NS	3.2	*	BIO	COLE HARBOUR, 1230h
86/05/17	HALIFAX	NS	2.3	*	BIO	1345h
86/05/17	HALIFAX	NS	2.8	*	BIO	COLE HARBOUR, 1412h
86/05/17	HALIFAX	NS	*	*	BIO	COLE HARBOUR, 1545h
86/05/17	HALIFAX	NS	3.1	*	BIO	1605h
86/05/17	HALIFAX	NS	4.8	*	BIO	COLE HARBOUR, 1808h
86/05/17	HALIFAX	NS	3.2	*	BIO	COLE HARBOUR, 2215h
86/05/17	HALIFAX	NS	0.7	*	BIO	MAY 16-17
86/05/17	KARS	ONT	2.5	1.6	BRND	WHITE ROCK
86/05/17	VANCOUVER	BC	12.0	*	RPS	RICHMOND
86/05/17	VANCOUVER	BC	15.0	*	RPS	RICHMOND
86/05/17	VANCOUVER	BC	17.4	*	RPS	RICHMOND
86/05/17	VANCOUVER	BC	15.0	*	RPS	RICHMOND
86/05/18	VANCOUVER	BC	5.0		TRIUMF	
86/05/18	VANCOUVER	BC	2.5	*	RPS	WHITE ROCK
86/05/18	VANCOUVER	BC	6.5	*	RPS	
86/05/19	BLACK CREEK	BC	5.7	3.8	RPS	
86/05/19	VANCOUVER	BC	5.8	1.3	RPS	
86/05/19	VANCOUVER	BC	6.9	*	RPS	
86/05/19	VICTORIA	BC	2.0		U OF V	
86/05/20	GABRIOLE ISL.	BC	0.4	*	RPS	
86/05/20	KARS	ONT	0.2		BRND	MAY 17-20
86/05/21	KARS	ONT	*		BRND	
86/05/21	KYUQUOT	BC	*		RPS	MAY 20-21
86/05/21	SASKATOON	SASK	3.5	0.9	SRC	
86/05/22	KARS	ONT	*		BRND	MAY 21-22
86/05/23	HALIFAX	NS	3.2	*	BIO	COLE HARBOUR, 07056h
86/05/23	KARS	ONT	0.5		BRND	MAY 22-23
86/05/24	VANCOUVER	BC	0.7	*	RPS	RICHMOND [ROOF]
86/05/24	VANCOUVER	BC	1.7	0.7	RPS	RICHMOND [ROOF]
86/05/24	VANCOUVER	BC	2.7	2.2	RPS	RICHMOND

* Less than detection limit
See Table 1 for explanation of reporting agency abbreviations

Table 16. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclides in Precipitation, Non-BRMD Analyses
(Becquerels per litre)

Sample Date	Location	Province	I-131	Cs-137	Reporting Agency	Remarks
86/05/25	HALIFAX	NS	0.9	2	BIO	TIMBERLEA, 0820h
86/05/25	VANCOUVER	BC	1.0	2	RPS	RICHMOND
86/05/26	VANCOUVER	BC	2.6	0.4	RPS	WHITE ROCK
86/06/02	HALIFAX	NS	2	0.6	SIC	DARTMOUTH, 1315h
86/06/02	KARS	ONT	1.7		BRMD	MAY 23-JUNE 02
86/06/08	HALIFAX	NS	2	2	BIO	HERRING COVE, 1100h
86/06/09	KARS	ONT	2		BRMD	JUNE 2-9
86/06/14	VANCOUVER	BC	2	2	RPS	RICHMOND
86/06/16	VANCOUVER	BC	2	2	RPS	RICHMOND

* Less than detection limit
See Table 1 for explanation of reporting agency abbreviations

Table 17. Chernobyl Reactor Accident Monitoring
Iodine-131 in the Canadian Milk Monitoring Network May-July 1986
(Becquerels per litre)

STATION	MAY 13	MAY 14	MAY 21	MAY 28	JUNE 4	JUNE 11	JUNE 18	JUNE 25	JULY 9
Vancouver, B.C.	*	*	1.8	0.92	*	*	*	*	*
Edmonton, Alta. Calgary, Alta.	* *	* *	0.97 *	1.9 0.30	0.66 *	* *	* *	* *	* *
Saskatoon, Sask. Regina, Sask.	* *	* *	0.39 2.0	0.99 1.7	* 1.0	* *	0.23 *	* *	* *
Winnipeg, Man.	*	*	0.72	0.99	*	*	*	*	*
Thunder Bay, Ont. Sault Ste. Marie, Ont.	* *	* *	0.34 *	* *	* *	* *	* *	* *	* *
Toronto, Ont. Windsor, Ont.	* *	0.37 *	* 0.2	* *	* *	* *	* *	- *	* *
Ottawa, (Dairy #1) (Dairy #2)	* *	- 0.45	0.15 0.17	- 0.26	- 0.34	- 0.33	- 0.16	* *	* *
Montreal, P.Q. Quebec, P.Q.	* *	* *	0.48 *	* 0.86	* 0.26	* 0.27	* *	* *	* *
Moncton, N.B. Sussex, N.B.	* *	* *	0.64 *	* *	* 0.36	* *	* *	* *	* *
Halifax, N.S. Truro, N.S.	* *	* *	0.34 *	0.2 *	* *	* *	* *	* *	* *
St. John's, Nfld.	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.20 Bq L⁻¹ except Ottawa (0.07 Bq L⁻¹)
- No Sample

Table 18. Chernobyl Reactor Accident Monitoring
Cesium-137 in the Canadian Milk Monitoring Network May-July 1986
(Becquerels per litre)

STATION	MAY 13	MAY 14	MAY 21	MAY 28	JUNE 4	JUNE 11	JUNE 18	JUNE 25	JULY 9
Vancouver, B.C.	*	*	1.9	1.6	2.0	1.1	0.58	0.66	*
Edmonton, Alta. Calgary, Alta.	* *	* *	0.66 *	1.1 *	0.36 *	* *	* *	* *	* *
Saskatoon, Sask. Regina, Sask.	* *	* *	* 0.57	* *	* *	* *	* *	* *	* *
Winnipeg, Man.	*	*	*	*	*	*	0.39	*	*
Thunder Bay, Ont. Sault Ste. Marie, Ont.	* *	* *	* *	* *	* *	* 0.79	* *	* *	* *
Toronto, Ont. Windsor, Ont.	* *	* *	* *	* *	* *	0.47 *	* *	0.43 *	* *
Ottawa, (Dairy #1) (Dairy #2)	* *	* *	* *	* 0.11	* 0.25	* 0.26	* 0.20	* 0.21	0.26 0.18
Montreal, P.Q. Quebec, P.Q.	* *	* *	* *	* *	0.44 *	0.26 0.37	* 0.50	* *	* *
Moncton, N.B. Sussex, N.B.	* *	* *	* *	* *	* *	* 0.50	* *	* *	* *
Halifax, N.S. Truro, N.S.	* *	* *	* *	* 0.58	0.48 *	0.41 *	0.62 0.44	* 0.70	* *
St. John's, Nfld.	*	*	*	*	*	*	*	*	*

* Less than Detection Limit of 0.24 Bq L⁻¹ except Ottawa (0.08 Bq L⁻¹)
- No Sample

Table 19. Cesium-137 in the Canadian Milk Monitoring Network 1986
(Millibecquerels per litre)

Station	Jan.-Mar.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average
Calgary	48	91	117	77	133	37	85	*	105	80
Edmonton	117	592	404	295	212	151	160	120	106	240
Halifax	83	107	443	310	192	216	123	173	233	209
Moncton	30	123	250	188	150	149	120	133	129	141
Montreal	58	72	285	157	94	115	108	118	207	135
Ottawa	52	117	268	186	130	151	152	164	227	161
Quebec	35	96	342	202	141	171	123	260	208	175
Regina	39	283	113	99	101	65	68	68	87	103
Saskatoon	68	145	99	149	130	56	77	82	46	95
S.S. Marie	150	160	424	294	205	175	-	186	240	229
St. John's	100	95	292	385	224	151	119	220	121	190
Sussex	33	*	325	308	190	102	73	152	179	154
Thunder Bay	*	62	145	127	97	125	101	115	173	108
Toronto	*	*	65	63	68	61	86	112	81	65
Truro	70	71	358	147	156	175	126	171	225	167
Vancouver	*	1090	1220	780	512	437	337	437	770	623
Windsor	*	53	131	105	59	117	93	46	65	77
Winnipeg	*	181	245	208	162	126	188	103	149	154
Bruce	37	240	95	*	*	62	155	127	142	101
Whiteshell	64	217	59	61	81	86	109	90	-	96
Average	49	189	284	192	153	136	126	145	176	165

* Less than detection limit of 30 mBq L⁻¹

- No sample

Table 20 - Strontium-90 in the Canadian Milk Monitoring Network 1986

(Millibecquerels per litre)

Station	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Annual Average
Calgary	60	80	66	63	67
Edmonton	61	81	84	70	74
Halifax	98	87	97	82	91
Moncton	129	111	121	113	119
Montreal	66	89	79	65	75
Ottawa	76	70	85	53	71
Quebec	53	82	96	97	82
Regina	84	85	66	76	78
Saskatoon	57	82	79	55	68
S.S. Marie	98	123	140	113	119
St. John's	112	126	177	99	129
Sussex	129	108	131	87	114
Thunder Bay	125	82	107	86	100
Toronto	50	36	49	43	45
Truro	72	65	94	80	78
Vancouver	63	55	63	60	60
Windsor	43	52	47	47	47
Winnipeg	51	69	70	98	72
National Average	81	82	92	77	83

Table 21
Chernobyl Reactor Accident Monitoring
Radionuclides in Milk, Non-BRMD Analyses
(Becquerels per litre)

Sample Date	Location	Province	I-131	Cs-137	Reporting Agency
86/05/11	FREDERICTON	NB	*	*	NBEPC
86/05/11	VANCOUVER	BC	*	*	RPS
86/05/12	EDMONTON	ALTA	*		U OF A
86/05/12	FREDERICTON	NB	*	*	NBEPC
86/05/12	VANCOUVER	BC	2.0	*	RPS
86/05/13	VANCOUVER	BC	1.8	*	RPS
86/05/13	VANCOUVER	BC	0.6	*	RPS
86/05/14	EDMONTON	ALTA	0.6		U OF A
86/05/14	FREDERICTON	NB	0.6	*	NBEPC
86/05/14	PICKERING	ONT	0.8		OH
86/05/14	VANCOUVER	BC	1.1	4.0	RPS
86/05/14	VANCOUVER	BC	1.7	1.5	RPS
86/05/15	EDMONTON	ALTA	3.4		U OF A
86/05/15	FREDERICTON	NB	0.5	0.1	NBEPC
86/05/15	TORONTO	ONT	0.7		MOL
86/05/15	TRURO	NS	0.3	*	BIO
86/05/15	TRURO	NS	*	*	BIO
86/05/15	VANCOUVER	BC	2.0	1.1	RPS
86/05/15	VANCOUVER	BC	1.1	*	RPS
86/05/15	VANCOUVER	BC	1.3	1.8	RPS
86/05/15	VANCOUVER	BC	0.3	1.1	RPS
86/05/16	EDMONTON	ALTA	2.2		U OF A
86/05/16	TRURO	NS	0.4	*	BIO
86/05/16	TRURO	NS	0.6	*	BIO
86/05/16	VANCOUVER	BC	2.0	*	RPS
86/05/17	VANCOUVER	BC	1.4	1.5	RPS
86/05/18	VANCOUVER	BC	0.6	0.7	RPS
86/05/18	VANCOUVER	BC	3.1	2.0	RPS

* Less than detection limit
See Table 1 for explanation of reporting agency abbreviations

Table 21. (cont'd)
Chernobyl Reactor Accident Monitorings
Radionuclides in Milk, Non-BRMD Analyses
(Becquerels per litre)

Sample Date	Location	Province	I-131	Cs-137	Reporting Agency
86/05/19	FREDERICTON	NB	1.1	0.1	MBEPC
86/05/19	TRURO	NS	0.5	8	BIO
86/05/19	VANCOUVER	BC	1.5	2.9	RPS
86/05/19	VANCOUVER	BC	1.6	2.4	RPS
86/05/20	TRURO	NS	0.5	8	BIO
86/05/20	VANCOUVER	BC	1.6	4.9	RPS
86/05/21	EDMONTON	ALTA	0.3	0.2	U OF A
86/05/21	FREDERICTON	NB	0.6	0.2	MBEPC
86/05/21	TRURO	NS	0.7	8	BIO
86/05/21	VANCOUVER	BC	0.5	0.4	RPS
86/05/21	VANCOUVER	BC	0.8	1.8	RPS
86/05/21	VANCOUVER	BC	0.3	1.1	RPS
86/05/21	VANCOUVER	BC	1.5	1.5	RPS
86/05/22	EDMONTON	ALTA	2.1	2.1	U OF A
86/05/22	EDMONTON	ALTA	0.4	0.4	U OF A
86/05/22	TRURO	NS	0.6	8	BIO
86/05/22	VANCOUVER	BC	2.3	2.6	RPS
86/05/22	VANCOUVER	BC	1.8	2.0	RPS
86/05/23	EDMONTON	ALTA	0.3	0.3	U OF A
86/05/23	FREDERICTON	NB	0.2	8	MBEPC
86/05/23	VANCOUVER	BC	1.6	0.7	RPS
86/05/24	TRURO	NS	0.8	8	BIO
86/05/24	VANCOUVER	BC	1.2	3.1	RPS
86/05/25	FREDERICTON	NB	0.6	0.3	MBEPC
86/05/25	TRURO	NS	0.2	8	BIO
86/05/26	EDMONTON	ALTA	0.2	0.2	U OF A
86/05/26	EDMONTON	ALTA	0.3	0.3	U OF A
86/05/26	FREDERICTON	NB	0.5	8	MBEPC
86/05/26	TRURO	NS	1.0	8	BIO
86/05/26	VANCOUVER	BC	1.6	1.1	RPS
86/05/26	VANCOUVER	BC	8	1.1	RPS
86/05/26	VANCOUVER	BC	1.1	1.1	RPS

8 Less than detection limit

See Table 1 for explanation of reporting agency abbreviations

Table 21. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclides in Milk, Non-BRMD Analyses
(Becquerels per litre)

Sample Date	Location	Province	I-131	Cs-137	Reporting Agency
86/05/27	EDMONTON	ALTA	0.2		
86/05/27	MILFORD	NS	0.1	*	U OF A
86/05/27	VANCOUVER	BC	0.6	1.7	BIO
86/05/27	VANCOUVER	BC	0.4	1.5	RPS
86/05/27	VANCOUVER	BC	0.8	1.8	RPS
86/05/27	VANCOUVER	BC	1.1	2.2	RPS
86/05/27	VANCOUVER	BC	*	2.9	RPS
86/05/28	EDMONTON	ALTA	0.2		
86/05/28	SHUB/TRURO	NS	0.7	*	U OF A
86/05/28	VANCOUVER	BC	1.8	2.4	BIO
86/05/29	EDMONTON	ALTA	0.2		
86/05/29	SHUB/TRURO	NS	0.4	*	U OF A
86/05/29	VANCOUVER	BC	0.9	4.0	BIO
86/06/02	VANCOUVER	BC	1.2	3.6	RPS
86/06/02	VANCOUVER	BC	*	1.1	RPS
86/06/03	VANCOUVER	BC	0.9	0.9	RPS
86/06/04	VANCOUVER	BC	*	1.7	RPS
86/06/06	FREDERICTON	NB	0.4	0.5	NBEPIC
86/06/06	VANCOUVER	BC	0.2	1.7	RPS
86/06/09	VANCOUVER	BC	*	1.8	RPS
86/06/09	VANCOUVER	BC	*	2.9	RPS
86/06/09	VANCOUVER	BC	0.5	0.9	RPS
86/06/10	VANCOUVER	BC	1.3	1.8	RPS
86/06/11	VANCOUVER	BC	*	1.8	RPS
86/06/11	VANCOUVER	BC	1.3	1.8	RPS
86/06/12	SHUB/TRURO	NS	0.2	0.4	BIO
86/06/12	VANCOUVER	BC	*	1.5	RPS

* Less than detection limit
See Table 1 for explanation of reporting agency abbreviations

Table 21. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclides in Milk, Non-BRMD Analyses
(Decouverts per litre)

Sample Date	Location	Province	I-131	Cs-137	Reporting Agency
86/06/13	SHUB/TRURO	NS	0.3	0.4	BIO
86/06/15	VANCOUVER	BC	1.1	2.6	RPS
86/06/17	VANCOUVER	BC	*	1.3	RPS
86/07/01	FREDERICTON	NB	*	0.3	NBEPC
86/07/16	VANCOUVER	BC	*	1.5	RPS
86/07/17	FREDERICTON	NB	*	0.2	NBEPC
86/07/19	VANCOUVER	BC	*	1.3	RPS
86/07/19	VANCOUVER	BC	*	1.1	RPS
86/08/04	FREDERICTON	NB	*	0.2	NBEPC
86/09/01	FREDERICTON	NB	*	*	NBEPC
86/09/25	FREDERICTON	NB	*	0.1	NBEPC
86/10/10	FREDERICTON	NB	*	0.2	NBEPC
86/11/13	FREDERICTON	NB	*	0.1	NBEPC
86/11/14	FREDERICTON	NB	*	0.1	NBEPC
86/12/05	FREDERICTON	NB	*	0.2	NBEPC

* Less than detection limit

See Table 1 for explanation of reporting agency abbreviations

Table 22.

Chernobyl Reactor Accident Monitoring
Screening Limits for Radioactivity in Foods

	<u>Cesium-134</u>	<u>Cesium-137</u>	<u>Iodine-131</u>
	(Becquerels/kilogram)		
Milk and drinking water (Becquerels/litre) (1)	50		10
Manufactured dairy products (1)	100		40
Spices (Becquerels/gram) (2)	3		70

(1) Combined limit for cesium-134 and cesium-137.

(2) Combined limit for ruthenium-103, ruthenium-106, cesium-134 and cesium-137.

Table 23
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Canadian Foodstuffs
(Recoveries per kilogram)

Sample Name	Sample Date	I-131	Ru-103	Ru-106	Cs-137	Cs-134	K-40	Location
GOATS MILK	86/05/15	13	*	*	*	*	62	CURRAN, ONT.
GOATS MILK	86/05/16	4.3	*	*	*	*	59	HAMMOND, ONT.
GOATS MILK	86/05/16	5.4	*	*	*	*	32	OTTAWA, ONT.
GOATS MILK	86/05/16	*	*	*	*	*	53	HAGERSVILLE, ONT.
GOATS MILK	86/05/22	1.1	*	*	0.30	*	52	CURRAN, ONT.
MOZZARELLA CHEESE	86/05/06	*	*	*	*	*	27	INGLESIDE, ONT.
MOZZARELLA CHEESE	86/04/24	*	*	*	*	*	25	INGLESIDE, ONT.
WHEY POWDER	86/04/24	*	*	*	0.81	*	1000	INGLESIDE, ONT.
CHEDDAR CHEESE	86/05/15	*	*	*	*	*	37	INGLESIDE, ONT.
WHEY POWDER	86/05/15	*	*	*	0.68	*	920	INGLESIDE, ONT.
WHEY POWDER	86/05/06	*	*	*	0.42	*	980	INGLESIDE, ONT.
CANNED ASPARAGUS	86/05/08	*	*	*	*	*	*	BRITISH COLUMBIA
BEEF (NECK)	86/05/22	*	*	*	0.49	*	100	OTTAWA, ONT.
FRESH CARIBOU	86/05/14	6.4	*	*	99	*	110	VICTORIA IS., NWT.
FROZEN CARIBOU	86/04/24	*	*	*	230	*	120	VICTORIA IS., NWT.
SEAL MEAT	86/06/17	*	*	*	1.3	*	120	CAMBRIDGE, NWT.
SNOW GOOSE	86/10/15	*	*	*	20	*	100	NE ARCTIC, JUVENILE MALE
SNOW GOOSE	86/10/15	*	*	*	19	*	140	NE ARCTIC, JUVENILE MALE
SNOW GOOSE	86/10/15	*	*	*	4.5	*	81	NE ARCTIC, JUVENILE MALE
SNOW GOOSE	86/10/15	*	*	*	26	*	100	NE ARCTIC, JUVENILE MALE
SNOW GOOSE	86/10/15	*	*	*	8.1	*	120	NE ARCTIC, JUVENILE FEMALE
SNOW GOOSE	86/10/15	*	*	*	17	*	120	NE ARCTIC, JUVENILE MALE
SNOW GOOSE	86/10/19	*	*	*	4.8	*	110	NE ARCTIC, JUVENILE MALE
SNOW GOOSE	86/10/21	*	*	*	4.8	*	100	NE ARCTIC, JUVENILE MALE
SNOW GOOSE	86/10/15	*	*	*	8.1	*	140	NE ARCTIC, JUVENILE MALE
SNOW GOOSE	86/10/15	*	*	*	5.7	*	110	NE ARCTIC, JUVENILE MALE
SNOW GOOSE	86/10/06	*	*	*	39	*	120	NE ARCTIC, JUVENILE MALE
SNOW GOOSE	86/10/15	*	*	*	7.2	*	130	NE ARCTIC, JUVENILE FEMALE
SNOW GOOSE	86/10/09	*	*	*	33	*	90	NE ARCTIC, JUVENILE MALE
SNOW GOOSE	86/10/15	*	*	*	5.1	*	110	NE ARCTIC, ADULT FEMALE
SNOW GOOSE	86/10/15	*	*	*	11	*	100	NE ARCTIC, ADULT FEMALE
SNOW GOOSE	86/10/29	*	*	*	1.7	*	110	NE ARCTIC, ADULT MALE
SNOW GOOSE	86/10/21	*	*	*	3.9	*	170	NE ARCTIC, ADULT MALE
SNOW GOOSE	86/10/15	*	*	*	7.2	*	96	NE ARCTIC, ADULT MALE
SNOW GOOSE	86/10/15	*	*	*	1.5	*	93	NE ARCTIC, ADULT FEMALE
SNOW GOOSE	86/10/29	*	*	*	5.1	*	84	NE ARCTIC, ADULT MALE

* Less than detection limit

Table 23. (cont'd)
Chernobyl Reactor Accident Monitorings
Radionuclide Analyses of Canadian Foodstuffs
(Becquerels per kilogram)

Sample Name	Sample Date	I-131	Ru-103	Ru-106	Cs-137	Cs-134	K-40	Location
WHITEFISH	86/07/29	*	*	*	3.4	*	24	WOLLASTON, SASK.
NORTHERN PIKE	86/07/21	*	*	*	0.20	*	25	GREAT SLAVE, NWT.
TROUT	86/07/26	*	*	*	0.80	*	66	WOLLASTON, SASK.
PICKEREL	86/07/21	*	*	*	5.8	*	63	ATHABASKA, SASK.
NORTHERN PIKE	86/07/26	*	*	*	14	*	72	WOLLASTON, SASK.
WHITEFISH	86/07/21	*	*	*	*	*	54	GREAT SLAVE, NWT.
TROUT	86/07/21	*	*	*	0.30	*	27	GREAT SLAVE, NWT.
WHITEFISH	86/07/24	*	*	*	0.20	*	27	L. WINNIPEG, MAN.
PICKEREL	86/07/26	*	*	*	0.70	*	26	L. WINNIPEG, MAN.
HERRING FILLETS	86/09/29	*	*	*	*	*	24	E. JEDDORE, N.S.
COD FILLETS	86/09/29	*	*	*	*	*	25	E. JEDDORE, N.S.
PORK FLAVOURING	86/12/29	*	*	*	1.4	*	400	
HONEY	86/08/21	*	*	*	*	*	13	EDMONTON, ALTA.
HONEY	86/08/21	*	*	*	*	*	23	EDMONTON, ALTA.
HONEY	86/08/21	*	*	*	*	*	29	EDMONTON, ALTA.

* Less than detection limit

Detection limit for I-131 = 0.15 Bq/Kg
 Detection limit for Ru-103 = 0.15 Bq/Kg
 Detection limit for Ru-106 = 0.14 Bq/Kg
 Detection limit for Cs-137 = 0.18 Bq/Kg
 Detection limit for Cs-134 = 0.13 Bq/Kg

Table 24
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Canadian Foodstuffs, Non-BRMD
(Beccerels per kilogram)

Sample Name	Sample Date	I-131	Cs-137	Cs-134	Ru-103	Reporting Agency	Location
CHEESE	86/05/18	0.60	0.70			RPS	VANCOUVER, B.C.
COTTAGE CHEESE	86/05/20	0.90	1.1			RPS	VANCOUVER, B.C.
BUTTER	86/05/21	0.70	0.30			RPS	VANCOUVER, B.C.
YOGURT	86/05/22	1.1	2.2			RPS	VANCOUVER, B.C.
CHEDDAR CHEESE	86/05/30	<0.5	<0.7			NREPC	FREDERICTON, N.B.
COTTAGE CHEESE	86/05/30	<0.2	<0.2			NREPC	FREDERICTON, N.B.
ASPARAGUS	86/05/14	2.5	*			RPS	VANCOUVER, B.C.
RADISH BOTTOMS	86/05/14	3.4	*			RPS	VANCOUVER, B.C.
RADISH BOTTOMS	86/05/14	3.4	*			RPS	VANCOUVER, B.C.
RADISH TOPS (LEAVES)	86/05/14	24	42			RPS	VANCOUVER, B.C.
GREEN ONIONS	86/05/14	2.0	*			RPS	VANCOUVER, B.C.
ASPARAGUS	86/05/14	5.0	2.1			RPS	VANCOUVER, B.C.
BOK-CHOI (UNWASHED)	86/05/15	8.3	12			RPS	VANCOUVER, B.C.
BOK CHOI (WASHED)	86/05/15	8.0	5.0			RPS	VANCOUVER, B.C.
SPINACH (UNWASHED)	86/05/15	26	15			RPS	VANCOUVER, B.C.
SPINACH (WASHED)	86/05/15	15	5.5			RPS	VANCOUVER, B.C.
SWISS CHARD	86/05/15	26	30			RPS	VANCOUVER, B.C.
YO CHOI (UNWASHED)	86/05/15	10	8.4			RPS	VANCOUVER, B.C.
YO CHOI (WASHED)	86/05/15	4.1	10			RPS	VANCOUVER, B.C.
ASPARAGUS (UNWASHED)	86/05/15	3.6	0.70			RPS	VANCOUVER, B.C.
ASPARAGUS (WASHED)	86/05/15	3.0	*			RPS	VANCOUVER, B.C.
TOMATOES (HOT HOUSE)	86/05/15	1.2	*			RPS	VANCOUVER, B.C.
RHUBARB	86/05/15	1.6	*			RPS	SURREY, B.C.
RADISH BOTTOMS	86/05/15	1.7	*			RPS	VANCOUVER, B.C.
OYSTER MUSHROOMS	86/05/15	*	*			RPS	VANCOUVER, B.C.
CAULIFLOWER	86/05/15	*	*			RPS	VICTORIA, B.C.
RADISH BOTTOMS	86/05/15	2.6	*			RPS	VICTORIA, B.C.
CAULIFLOWER	86/05/15	*	*			RPS	VICTORIA, B.C.
BOK CHOI	86/05/15	8.9	7.5	2.0	5.1	RPS	VANCOUVER, B.C.

* Less than detection limit
See Table 1 for explanation of reporting agency abbreviations

Table 24. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Canadian Foodstuffs, Non-BRND
(Becquerels per kilogram)

Sample Name	Sample Date	I-131	Cs-137	Cs-134	Ru-103	Reporting Agency	Location
ASPARAGUS	86/05/16	6.6				SREQ	MONTREAL, P.Q.
ASPARAGUS	86/05/16	10				SREQ	MONTREAL, P.Q.
RHUBARB	86/05/16	3.7				SREQ	MONTREAL, P.Q.
RHUBARB	86/05/16	3.0				SREQ	MONTREAL, P.Q.
OSTRICH FERN	86/05/19	<13	33	<5.0		NBEP	NEW BRUNSWICK
FIDDLEHEADS	86/05/20	<3.0	<3.0	<1.0		NBEP	NEW BRUNSWICK
FIDDLEHEADS	86/05/21	<1.0	<2.0	<1.0		NBEP	NEW BRUNSWICK
RHUBARB	86/05/21	<3.0	<3.0	<2.0		NBEP	NEW BRUNSWICK
RHUBARB	86/05/21	<5.0	<4.0	<2.0		NBEP	NEW BRUNSWICK
RHUBARB	86/05/22	<0.5	<0.5			BIO	DARTMOUTH, N.S.
RHUBARB	86/05/22	0.19	<0.3			BIO	BERWICK, N.S.
FIDDLEHEADS	86/05/22	3.0				SREQ	MONTREAL, P.Q.
ASPARAGUS	86/05/22	5.4				SREQ	MONTREAL, P.Q.
ONIONS	86/05/22	8.6				SREQ	MONTREAL, P.Q.
RADISH	86/05/22	14				SREQ	MONTREAL, P.Q.
LEEK	86/05/22	3.5				SREQ	MONTREAL, P.Q.
RHUBARB	86/05/23	0.90	<0.9			BIO	ST. JOHN'S, NFLD.
RHUBARB	86/05/27	0.70	2.4			RPS	VANCOUVER, B.C.
STRAWBERRIES	86/06/16	1.4	1.8			RPS	SURREY, B.C.
SPINACH	86/06/16	1.4	*			RPS	SURREY, B.C.
CARROT BOTTOMS	86/06/16	*	*			RPS	SURREY, B.C.
CARROT TOPS	86/06/16	*	*			RPS	SURREY, B.C.
CABBAGE	86/06/16	*	*			RPS	SURREY, B.C.
RASPBERRIES	86/07/07	*	5.5			RPS	SURREY, B.C.
CHERRIES	86/07/09	*	*			RPS	SURREY, B.C.
RADISH BOTTOMS(ROOT)	86/07/10	1.0	*			RPS	SOUTH SURREY, B.C.

* Less than detection limit

See Table 1 for explanation of reporting agency abbreviations

Table 24. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Canadian Foodstuffs, Non-BRMD
(Becquerels per Kilogram)

Sample Name	Sample Date	I-131	Cs-137	Cs-134	Ru-103	Reporting Agency	Location
RADISH TOPS (LEAVES)	86/07/10	1.9	2			RPS	SOUTH SURREY, B.C.
SPINACH	86/07/10	2	2			RPS	SURREY, B.C.
LETTUCE	86/07/10	3.5	3.5			RPS	SURREY, B.C.
BLUEBERRIES	86/08/13	<0.6	1.7	<0.6		NBEPC	NEW BRUNSWICK
NEW POTATOES	86/07/10	2	2			RPS	SURREY, B.C.
GROUND BEEF	86/05/24	<1.3	<0.4			NBEPC	FREDERICTON, N.B.
VENISON	86/05/24	<1.3	51			NBEPC	FREDERICTON, N.B.
GROUND PORK	86/07/10	2	2			RPS	VANCOUVER, B.C.
GROUND PORK	86/07/10	2	2			RPS	VANCOUVER, B.C.
CONOE SALMON	86/07/06	2	2			RPS	B.C. COAST
SOCKEYE SALMON	86/07/07	2	2			RPS	B.C. COAST

2 Less than detection limit
See Table 1 for explanation of reporting agency abbreviations

Table 25
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Imported Foodstuffs
(Becquerels per kilogram)

Sample Name	Country	Sample Date	I-131	Ru-103	Ru-106	Cs-137	Cs-134	K-40
BUCHU LEAVES	AFRICA	86/10/06	±	±	±	±	±	390
SWISS EMMENTAL CREAM CHEESE	AUSTRIA	86/09/25	±	±	±	±	±	14
	AUSTRIA	86/09/25	±	±	±	±	1.8	8.9
RASPBERRY CONC. APPLE CONCENTRATE GRAPE CONCENTRATE	AUSTRIA	86/08/18	±	±	±	±	±	470
	AUSTRIA	86/12/19	±	±	±	±	32	190
	AUSTRIA	86/12/19	±	±	±	0.47	±	60
ENDIVE	BELGIUM	86/05/12	±	±	±	±	±	32
CORN SALAD	BELGIUM	86/05/18	100	14	±	5.5	1.5	220
CORN SALAD	BELGIUM	86/05/18	100	9.0	±	8.8	5.3	250
PURPLE PEPPERS	BELGIUM	86/05/17	3.3	±	±	±	±	62
ENDIVE	BELGIUM	86/05/17	±	±	±	±	±	40
RED PEPPERS	BELGIUM	86/05/17	±	±	±	±	±	48
WHITE PEPPERS	BELGIUM	86/05/17	±	±	±	±	±	48
CORN SALAD	BELGIUM	86/05/17	2.0	±	±	1.7	±	48
CORN SALAD	BELGIUM	86/05/17	90	8.2	±	5.9	3.4	150
ENDIVE	BELGIUM	86/05/24	27	3.6	±	3.1	1.5	160
WHITE PEPPERS	BELGIUM	86/05/24	±	±	±	±	±	66
ENDIVE	BELGIUM	86/05/24	1.7	±	±	2.9	1.4	39
PURPLE PEPPERS	BELGIUM	86/05/24	±	±	±	±	±	66
RED PEPPERS	BELGIUM	86/05/24	0.93	±	±	4.4	2.3	78
ENDIVE	BELGIUM	86/05/24	1.1	±	±	2.0	1.2	78
	BELGIUM	86/05/24	±	±	±	±	±	54
STRAWBERRY JAM	BULGARIA	86/09/19	±	±	±	±	±	53
RASPBERRY JAM	BULGARIA	86/09/19	±	±	±	±	±	51
DRIED RHUBARB	BULGARIA	86/10/31	±	±	±	210	±	500
SHRIMP	CHINA	86/08/27	±	±	±	±	±	54
GARLIC FLAKES	CHINA	86/12/05	±	±	±	±	±	110

± Below Detection Limit

Table 25. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Imported Foodstuffs
(Bequerels per kilogram)

Sample Name	Country	Sample Date	I-131	Ru-103	Ru-106	Cs-137	Cs-134	K-40
CANNED CREAM	DENMARK	86/08/01	8	8	8	1.1	0.36	53
CREAM CHEESE	DENMARK	86/10/07	8	8	8	0.20	8	2.3
APRICOT COMPOTE	DENMARK	86/09/30	8	8	8	8	8	5.8
BLACKCURRANT COMPOTE	DENMARK	86/09/30	8	8	8	8	8	5.0
RASPBERRY COMPOTE	DENMARK	86/09/30	8	8	8	8	8	7.2
PORK RIBS	DENMARK	86/05/22	8	8	8	8	8	54
CANNED MEAT	DENMARK	86/06/02	8	8	8	8	8	79
BASIL	EGYPT	86/10/01	8	8	8	11	8	2100
GROUND MARJORAM	EGYPT	86/10/14	8	8	8	8	8	730
SPEARMINT LEAVES	EGYPT	86/12/03	8	12	98	140	58	790
CANNED CREAM	ENGLAND	86/06/25	8	8	8	2.1	0.19	45
PAPRIKA	ENGLAND	86/12/16	8	8	8	8	8	1300
TURNERIC	ENGLAND	86/12/16	8	8	8	8	8	420
EDAM CHEESE	FINLAND	86/10/08	8	8	8	11	4.4	27
ROQUEFORT CHEESE	FRANCE	86/08/08	8	8	8	8	8	9.0
BUCHE CHEESE	FRANCE	86/08/08	8	8	8	2.1	8	60
GOAT'S MILK CHEESE	FRANCE	86/11/27	8	8	8	0.28	0.13	4.1
ROQUEFORT CHEESE	FRANCE	86/11/27	8	8	8	8	8	3.8
ROQUEFORT CHEESE	FRANCE	86/11/27	8	8	8	8	8	2.4
GREEN BEANS	FRANCE	86/05/11	8	8	8	8	8	52
LEAF LETTUCE	FRANCE	86/05/11	37	12	8	7.5	3.5	170
LEAF LETTUCE	FRANCE	86/05/18	23	10	8	3.9	7.8	

8 Below Detection Limit

Table 25. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Imported Foodstuffs
(Becquerels per kilogram)

Sample Name	Country	Sample Date	I-131	Ru-103	Ru-106	Cs-137	Cs-134	K-40
CORN SALAD	FRANCE	86/05/18	58	9.1	2	8.5	2.7	170
OAK LEAF LETTUCE	FRANCE	86/05/18	36	32	12	28	13	130
ASPARAGUS	FRANCE	86/05/18	2	2	2	2	2	34
GREEN BEANS	FRANCE	86/05/18	2	2	2	2	2	83
GREEN CHICORY	FRANCE	86/05/18	180	250	2	160	96	140
RED CHICORY	FRANCE	86/05/18	67	50	2	36	15	150
POURPIER	FRANCE	86/05/18	1.5	0.42	2	2	2	190
ASPARAGUS	FRANCE	86/05/24	2	2	2	2	2	49
GREEN BEANS	FRANCE	86/05/24	1.7	1.0	2	2.3	2	70
BATAVIAS LETTUCE	FRANCE	86/05/24	11	6.5	2	9.0	3.9	170
CORN SALAD	FRANCE	86/05/24	13	2	2	1.7	2	170
BATAVIAS LETTUCE	FRANCE	86/05/24	6.7	5.0	2	5.0	2.5	140
OAK LEAF LETTUCE	FRANCE	86/05/24	18	10	2	8.2	4.0	140
GREEN CHICORY	FRANCE	86/05/16	230	35	2	18	10	93
THYME	FRANCE	86/05/16	1200	320	90	160	100	180
TARRAGON LEAVES	FRANCE	86/11/13	2	2	2	2	2	110
ROSEMARY LEAVES	FRANCE	86/11/13	2	0.64	2	14	5.4	310
SAVORY LEAVES	FRANCE	86/11/13	2	2	2	2.7	2	640
WILD PANIS	FRANCE	86/10/14	2	2	2	2	2	1400
FENNEL	FRANCE	86/10/08	2	2	2	2	2	190
BAY LEAVES	FRANCE	86/10/08	2	2	2	22	11	110
THYME	FRANCE	86/10/08	2	2	2	0.88	2	220
ROSEMARY	FRANCE	86/10/08	2	2	2	2	2	400
VIOLET LEAVES	FRANCE	86/10/06	2	2	2	4.3	2	1100
HYSDPE	FRANCE	86/10/31	2	2	2	0.79	2	460
LUZERNE	FRANCE	86/10/31	2	2	2	12	2	940
ROSEMARY	FRANCE	86/10/30	2	2	2	2	2	530
MARJORAH	FRANCE	86/10/30	2	2	2	1.6	2	680
THYME	FRANCE	86/10/30	2	2	2	5.3	2	380
THYME	FRANCE	86/11/10	2	2	2	2	2	360
BASIL	FRANCE	86/11/07	2	2	2	5.6	2	540
CELERY SEED	FRANCE	86/12/10	2	2	2	2	2	500
GROUND CHICORY	FRANCE	86/12/05	2	2	2	2	2	770
CHICORY (GRAIN 1)	FRANCE	86/12/05	2	2	2	2	2	600
CHICORY (GRAIN 4)	FRANCE	86/12/05	2	2	2	2	2	930
BEAUJOLAIS NOUVEAU	FRANCE	86/10/31	2	2	2	2	2	47
BEAUJOLAIS NOUVEAU	FRANCE	86/10/31	2	2	2	0.42	0.63	47
BEAUJOLAIS NOUVEAU	FRANCE	86/10/31	2	2	2	0.42	0.63	47
LIME-MINT TEA	FRANCE	86/12/01	2	2	2	2	2	430
LIME-LEAVES TEA	FRANCE	86/12/01	2	2	2	2	2	370

2 Below Detection Limit

Table 25. (cont'd)
Chernobyl Reactor Accident Monitorings
Radionuclide Analyses of Imported Foodstuffs
(Bequerels per kilogram)

Sample Name	Country	Sample Date	I-131	RU-103	RU-106	Cs-137	Cs-134	K-40
SPECIAL 5 TEA	FRANCE	86/12/01	8	8	8	8	8	380
MEDLARS DRIED FIGS	GREECE	86/05/11	56	12	8	4.6	2.2	52
	GREECE	86/10/20	8	8	8	21	9.4	230
OREGANO	GREECE	86/10/01	8	8	8	8.9	8	250
OREGANO	GREECE	86/10/30	8	3.2	8	250	94	480
ALMONDS	GREECE	86/10/24	8	8	8	18	5.4	160
OREGANO	GREECE	86/11/10	8	8	8	11	3.1	540
OREGANO	GREECE	86/12/11	8	8	8	11	5.3	500
RED PEPPERS	HOLLAND	86/05/08	2.3	8	8	8	8	39
YELLOW PEPPERS	HOLLAND	86/05/08	3.6	8	8	8	8	33
WHITE PEPPERS	HOLLAND	86/05/08	7.2	8	8	8	8	30
PURPLE PEPPERS	HOLLAND	86/05/08	4.3	8	8	8	8	33
RED PEPPERS	HOLLAND	86/05/08	3.4	8	8	8	8	57
CHICORY / ENDIVE	HOLLAND	86/05/08	8	8	8	8	8	5.5
YELLOW PEPPERS	HOLLAND	86/05/09	0.70	8	8	8	8	45
RED PEPPERS	HOLLAND	86/05/09	8	8	8	8	8	73
YELLOW PEPPERS	HOLLAND	86/05/11	8	8	8	8	8	43
RED PEPPERS	HOLLAND	86/05/11	0.47	8	8	8	8	50
RED CABBAGE	HOLLAND	86/05/20	8	8	8	8	8	73
STRAWBERRY PULP	HOLLAND	86/09/03	8	8	8	8	8	50
STRAWBERRY PULP	HOLLAND	86/09/03	8	8	8	8	8	50
RASPBERRY PULP	HOLLAND	86/09/03	8	8	8	8	8	71
RASPBERRY PULP	HOLLAND	86/09/03	8	8	8	8	8	71
RASPBERRY JAM	HOLLAND	86/09/22	8	8	8	8	8	18
MIXED FRUIT JAM	HOLLAND	86/09/22	8	8	8	8	8	17
DEHYDRATED BEANS	HOLLAND	86/12/05	8	8	8	8	8	150
RED BELL PEPPERS	HOLLAND	86/12/05	8	8	8	8	8	190
DOVER SOLE	HOLLAND	86/05/10	8	8	8	0.95	8	48
SOLE FILLETS	HOLLAND	86/08/27	8	8	8	0.90	8	58
POPPY SEED	HOLLAND	86/10/17	8	8	8	8	8	110
CARAWAY SEEDS	HOLLAND	86/10/29	8	8	8	8	8	360
POPPY SEEDS	HOLLAND	86/10/29	8	8	8	8	8	250

8 Below Detection Limit

Table 25. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Imported Foodstuffs
(Becquerels per kilogram)

Sample Name	Country	Sample Date	I-131	Ru-103	Ru-106	Cs-137	Cs-134	K-40
CARAWAY	HOLLAND	86/11/18	2	2	2	270	120	400
POPPY SEEDS	HOLLAND	86/11/18	2	2	2	2	2	250
EGG POWDER	HOLLAND	86/12/15	2	2	2	0.68	0.20	170
GOOSE GRASS HERB	HUNGARY	86/10/14	2	2	2	2	2	1400
GOLDEN ROD	HUNGARY	86/10/14	2	2	2	1.3	2	630
PAPRIKA	HUNGARY	86/10/15	2	2	2	2	2	960
GOOSE GRASS HERB	HUNGARY	86/10/31	2	2	2	2	2	810
SHELLED WALNUTS	INDIA	86/11/04	2	2	2	0.70	2	140
SHELLED PISTACHIOS	IRAN	86/12/10	2	2	2	2	2	190
PISTACHIOS	IRAN	86/11/07	2	2	2	2	2	160
CUMIN SEEDS	IRAN	86/11/18	2	3.4	17	30	14	1000
RED BEET POWDER	ISRAEL	86/12/05	2	2	2	2	2	400
RADDICCHIO ROSSO	ITALY	86/05/06	7.0	2	2	0.50	2	17
CURLY ENDIVE	ITALY	86/05/06	6.0	0.40	2	2	2	40
FENNEL	ITALY	86/05/06	3.0	2	2	2	2	39
PLEUROTUS MUSHROOMS	ITALY	86/05/06	2300	19	2	5.5	2.4	50
PORTOBELLO MUSHROOMS	ITALY	86/05/06	30	2	2	0.70	2	64
SUNDRIED TOMATOES	ITALY	86/05/06	2	2	2	2	2	390
CHICORY	ITALY	86/05/09	4.2	2.8	2	2.7	1.7	150
CHICORY	ITALY	86/05/11	2	2	2	2	2	85
RED CHICORY	ITALY	86/05/24	2	2	2	2	2	79
GREEN GRAPES	ITALY	86/09/18	2	2	2	2	2	2

* Below Detection Limit

Table 25. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Imported Foodstuffs
(Becquerels per kilogram)

Sample Name	Country	Sample Date	I-131	RU-103	RU-106	Cs-137	Cs-134	K-40
DRIED FIGS	ITALY	86/12/05	z	z	z	12	5.2	62
JUNIPER BERRY	ITALY	86/10/21	z	z	z	18	7.3	270
SOLE FILLETS	KOREA	86/08/27	z	z	z	z	z	87
CORIANDER SEED	MOROCCO	86/12/19	z	z	z	1.6	z	440
CORIANDER	MOROCCO	86/10/15	z	z	z	z	z	480
CORIANDER	MOROCCO	86/10/21	z	z	z	z	z	530
THYME	MOROCCO	86/11/14	z	z	z	2.5	z	530
VERVEINE	MOROCCO	86/11/14	z	z	z	12	11	540
CANNED MEAT (PORK)	NETH.	86/06/25	z	z	z	z	z	42
HOLLANDAISE POWDER	NORWAY	86/08/05	z	z	z	z	z	30
JARLSBERG CHEESE	NORWAY	86/10/31	z	z	z	0.45	0.28	2.8
FROZEN STRAWBERRIES	POLAND	86/09/12	z	z	z	5.9	2.3	45
DRIED STRAWBERRIES	POLAND	86/09/15	z	z	z	4.0	1.6	100
APPLE CONCENTRATE	POLAND	86/12/12	z	z	z	79	33	240
COFFEE SUBSTITUTE	POLAND	86/09/15	z	z	z	3.2	1.5	73

z Below Detection Limit

Table 25. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Imported Foodstuffs
(Becquerels per kilogram)

Sample Name	Country	Sample Date	I-131	Ru-103	Ru-106	Cs-137	Cs-134	K-40
DRIED MUSHROOMS	ROMANIA	86/12/15	2	2	2	13	2	800
DRIED MUSHROOMS	ROMANIA	86/12/15	2	2	2	26	2	850
RASPBERRY PUREE	SCOTLAND	86/10/29	2	2	2	3.3	1.5	35
SCAMPI TAILS	SCOTLAND	86/05/29	2	2	2	2.2	2	16
SCAMPI TAILS	SCOTLAND	86/05/29	2	2	2	2.1	2	14
SCAMPI TAILS	SCOTLAND	86/05/29	2	2	2	3.3	2	15
SCAMPI TAILS	SCOTLAND	86/05/29	2	2	2	13	2	7.3
HADDOCK FILLETS	SCOTLAND	86/09/12	2	2	2	6.4	2	150
HADDOCK FILLETS	SCOTLAND	86/09/12	2	2	2	5.9	2	120
HADDOCK FILLETS	SCOTLAND	86/09/12	2	2	2	2.8	0.43	63
HADDOCK FILLETS	SCOTLAND	86/09/12	2	2	2	11	1.4	160
LEMONS	SPAIN	86/05/09	2	2	2	2	2	37
LEMONS	SPAIN	86/05/09	2	2	2	2	2	36
ORANGES	SPAIN	86/05/09	2	2	2	2	2	36
LEMONS	SPAIN	86/05/09	2	2	2	2	2	41
LOGUATS	SPAIN	86/05/11	2.2	2	2	2	2	130
MELONS	SPAIN	86/05/28	2	2	2	2	2	200
WHOLE ANISE	SPAIN	86/10/01	2	2	2	2	2	1200
GROUND PAPRIKA	SPAIN	86/11/14	2	2	2	2	2	350
DRIED LEMON PIECES	SPAIN	86/10/14	2	2	2	4.6	2	130
UVA URSI	SPAIN	86/10/14	2	2	2	1.0	2	500
ROSEMARY	SPAIN	86/10/08	2	2	2	6.8	2.3	380
THYME	SPAIN	86/10/08	2	2	2	4.2	2	420
OLIVE LEAVES	SPAIN	86/10/04	2	2	2	3.2	2	310
THYME	SPAIN	86/10/15	2	2	2	2.4	1.4	240
SHELLED ALMONDS	SPAIN	86/09/19	2	2	2	2	2	630
ANISE SEED	SPAIN	86/11/24	2	2	2	2	2	510
PAPRIKA	SPAIN	86/12/03	2	2	2	2	2	470
THYME	SPAIN	86/12/10	2	2	2	11	2	300
PAPRIKA	SPAIN	86/12/11	2	2	2	2.8	2	960
PAPRIKA	SPAIN	86/12/17	2	2	2	1.5	2	1400
PAPRIKA	SPAIN	86/12/17	2	2	2	2	2	1500
PAPRIKA	SPAIN	86/12/18	2	2	2	2	2	2

2 Below Detection Limit

Table 25. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Imported Foodstuffs
(Bequerels per kilogram)

Sample Name	Country	Sample Date	I-131	Ru-103	Ru-106	Cs-137	Cs-134	K-40
CONFECTIONARY SUGAR	SWEDEN	86/09/17	§	§	§	4.0	1.0	900
LINGONBERRIES	SWEDEN	86/10/24	§	§	§	0.69	§	§
DRIED RAISINS	TURKEY	86/10/14	§	§	§	7.0	1.6	390
FIG PASTE	TURKEY	86/10/08	§	§	§	46	21	220
FILBERTS	TURKEY	86/10/24	§	§	§	64	26	200
CHICK PEAS	TURKEY	86/10/27	§	§	§	2.6	1.2	370
RAISINS	TURKEY	86/10/30	§	§	§	§	§	280
LENTILS	TURKEY	86/10/20	§	§	§	59	25	270
DRIED APRICOTS	TURKEY	86/10/30	§	1.3	§	31	13	420
LENTILS	TURKEY	86/11/07	§	§	§	§	§	310
DRIED LENTILS	TURKEY	86/11/21	§	§	§	38	16	260
CHICK PEAS	TURKEY	86/11/21	§	§	§	0.53	§	310
DRIED APRICOTS	TURKEY	86/11/28	§	§	§	44	19	510
FILBERTS	TURKEY	86/12/15	§	§	§	67	27	180
FILBERTS	TURKEY	86/12/15	§	§	§	76	29	200
OREGANO	TURKEY	86/12/12	§	§	§	§	§	460
SAGE LEAVES	TURKEY	86/10/01	§	§	§	1.1	§	400
FENUGREEK SEED	TURKEY	86/10/01	§	§	§	§	§	330
BAY LEAVES	TURKEY	86/10/01	§	55	140	200	92	180
OREGANO	TURKEY	86/11/14	§	§	§	§	§	190
OREGANO	TURKEY	86/10/17	§	260	920	1800	820	670
RED BELL PEPPERS	TURKEY	86/10/17	§	§	§	§	§	360
WHOLE CUMIN	TURKEY	86/10/06	§	§	§	1.0	§	500
BAY LEAVES	TURKEY	86/10/23	§	§	§	§	§	140
FENNEL	TURKEY	86/10/21	§	§	§	§	§	570
BAY LEAVES	TURKEY	86/10/22	§	§	§	§	§	140
GROUND OREGANO	TURKEY	86/11/05	§	§	§	3.1	§	470
OREGANO	TURKEY	86/11/07	§	§	§	§	§	480
BAY LEAVES	TURKEY	86/11/14	§	11	§	220	120	120
OREGANO	TURKEY	86/11/14	§	16	56	540	140	140
SAGE	TURKEY	86/11/14	§	350	1900	6300	2800	660
BAY LEAVES	TURKEY	86/11/14	§	27	170	400	180	610
SIFTED OREGANO	TURKEY	86/11/18	§	52	220	1400	570	200
BAY LEAVES	TURKEY	86/11/24	§	§	§	8.1	3.0	470
FENNEL SEED	TURKEY	86/11/10	§	§	§	§	§	140
OREGANO	TURKEY	86/11/20	§	§	§	§	§	730
PUMPKIN SEED	TURKEY	86/11/26	§	4.6	61	150	61	490
PUMPKIN SEED	TURKEY	86/11/28	§	§	§	3.6	§	360

§ Below Detection Limit

Table 25. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Imported Foodstuffs
(Bequerels per kilogram)

Sample Name	Country	Sample Date	I-131	Ru-103	Ru-106	Cs-137	Cs-134	K-40
ANISE SEED	TURKEY	86/12/02	2	2	2	11	4.0	610
OREGANO	TURKEY	86/12/15	2	2	2	10	3.4	490
OREGANO	TURKEY	86/12/19	2	14	180	570	260	180
BAY LEAVES	TURKEY	86/12/23	2	15	140	370	160	240
FRESH ASPARAGUS	U.S.A.	86/05/08	2	2	2	2	2	2
PERCH and PIKE	U.S.S.R.	86/09/26	2	2	2	2	2	72
STURGEON	U.S.S.R.	86/09/26	2	2	2	2	2	75
CARP	U.S.S.R.	86/09/26	2	2	2	2	2	47
WOBLA	U.S.S.R.	86/09/26	2	2	2	2	2	220
WASHED RAISINS	UNKNOWN	86/09/25	2	2	2	6.1	2.2	330
UNWASHED RAISINS	UNKNOWN	86/09/25	2	2	2	6.6	3.0	350
BUTTER CHEESE	W. GERM.	86/10/01	2	2	2	1.2	0.62	2.1
PISTACHIOS	W. GERM.	86/10/01	2	2	2	2	2	160
PARSLEY LEAVES	W. GERM.	86/10/06	2	2	2	12	2.6	1900
GENTIAN ROOT	W. GERM.	86/10/14	2	2	2	6.9	2	140
RUE HERB CUTTINGS	W. GERM.	86/10/14	2	2	2	2	2	560
ALOE POWDER	W. GERM.	86/10/14	2	2	2	2	2	80
ORANGE TREE LEAVES	W. GERM.	86/10/21	2	2	2	1.1	2	220
CHERRY-TAIL	W. GERM.	86/10/21	2	2	2	1.9	2	780
ROOIBUS TEA	W. GERM.	86/10/21	2	2	2	2	2	170
SENE LEAVES	W. GERM.	86/10/21	2	2	2	3.7	2	810
ARTICHOKES LEAVES	W. GERM.	86/10/21	2	2	2	3.7	2	1500
FRUIT TEA	W. GERM.	86/10/21	2	2	2	2	2	250
SCULLAP HERB	W. GERM.	86/10/21	2	2	2	1.6	2	710
COLONBO ROOT	W. GERM.	86/10/21	2	2	2	2	2	770
CHERRY-TAIL	W. GERM.	86/10/21	2	2	2	2	2	900
MINT PEPPER	W. GERM.	86/10/21	2	2	2	14	3.9	690

* Below Detection Limit

Table 25. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Imported Foodstuffs
(Bequerels per kilogram)

Sample Name	Country	Sample Date	I-131	Ru-103	Ru-106	Cs-137	Cs-134	K-40
STRAWBERRY PUREE	YUGO.	86/07/28	2	2	2	2	2	130
RASPBERRY PUREE	YUGO.	86/07/28	2	2	2	2	2	130
CHERRY JAM	YUGO.	86/09/15	2	2	2	2	2	21
RASPBERRY JAM	YUGO.	86/09/15	2	2	2	2	2	3.5
STRAWBERRY JAM	YUGO.	86/09/22	2	2	2	1.5	0.77	5.9
RASPBERRY JAM	YUGO.	86/09/22	2	2	2	2	2	9.2
LINE SAPWOOD	YUGO.	86/10/14	2	2	2	6.1	1.6	160
BLACKBERRY BUSH	YUGO.	86/10/06	2	2	2	3.1	2	390
BURDOCK ROOT	YUGO.	86/10/06	2	2	2	7.2	2	1600
WILD ROSE	YUGO.	86/10/31	2	2	2	2	2	570
GOLDEN ROD	YUGO.	86/10/31	2	2	2	2	2	680
DALMATIAN SAGE	YUGO.	86/10/30	2	2	2	1.0	2	420
DALMATIAN SAGE	YUGO.	86/11/26	2	10	74	260	94	470
CANOMILE TEA	YUGO.	86/11/18	2	2	2	2	2	930
ROSE HIP TEA	YUGO.	86/11/18	2	2	2	4.0	2	600

2 Below Detection Limit
Detection limit for I-131 = 0.15 Bq/Kg
Detection limit for Ru-103 = 0.15 Bq/Kg
Detection limit for Ru-106 = 0.14 Bq/Kg
Detection limit for Cs-137 = 0.18 Bq/Kg
Detection limit for Cs-134 = 0.13 Bq/Kg

Table 26
Chernobyl Reactor Accident Monitorings
Radionuclide Analyses of Imported Foodstuffs, Non-BRMD
(Becquerels per kilogram)

Sample Name	Country	Sample Date	I-131	Cs-137	Cs-134	Reporting Agency
ENDIVE	BELGIUM	86/05/14	1.7			SREQ
CORN SALAD	BELGIUM	86/05/18	120			SREQ
ENDIVE	BELGIUM	86/05/18	0.90			SREQ
ENDIVE	BELGIUM	86/05/18	1.2			SREQ
DRIED MUSHROOMS	CHINA	86/06/12	4.5	40		RPS
CAMBERT CHEESE	DENMARK	86/06/11	1.3	0.87		SREQ
BLUE CREAM CHEESE	DENMARK	86/06/11	2.4	1.1		SREQ
LUNCHEON MEAT	DENMARK	86/06/06	2	2		RPS
HAM	DENMARK	86/06/18	2	2		RPS
PORK BELLIES	DENMARK	86/06/18	2	2		RPS
PORK BELLIES	DENMARK	86/06/18	2	5.3		RPS
PORK BELLIES	DENMARK	86/06/18	2	2.8		RPS
PORK RIBS	DENMARK	86/06/13	1.1	1.2		SREQ
PORK RIBS	DENMARK	86/06/13	0.73	1.0		SREQ
PORK RIBS	DENMARK	86/06/16	2	2		SREQ
CHEESE	FRANCE	86/06/11	1.3	0.67		SREQ
CHEESE	FRANCE	86/06/11	7.4	8.0		SREQ
MUNSTER CHEESE	FRANCE	86/06/16	0.88	1.8		SREQ
CAMBERT CHEESE	FRANCE	86/06/16	3.4	5.1		SREQ
TARTARE CHEESE	FRANCE	86/06/16	0.20	2.2		SREQ
MUNSTER CHEESE	FRANCE	86/06/18	0.77	<0.8		SREQ
CHEESE	FRANCE	86/06/18	4.0	4.4		SREQ
CHEESE	FRANCE	86/06/18	0.44	2.0		SREQ
BOURGIN CHEESE	FRANCE	86/06/19	1.3	2.3		SREQ
CAMBERT CHEESE	FRANCE	86/06/19	5.1	12		SREQ
CHEESE	FRANCE	86/06/19	2.8	7.1		SREQ
MUSHROOMS	FRANCE	86/06/15	<0.2	<0.2		BIO
MUSHROOMS	FRANCE	86/06/15	<0.2	<0.2		BIO
ASPARAGUS	FRANCE	86/05/25	1.5			SREQ
BEAUJOLAIS NOUVEAU	FRANCE	86/11/17	2	0.31	0.16	WMRE
BEAUJOLAIS NOUVEAU	FRANCE	86/11/17	2	0.26	0.16	WMRE
BEAUJOLAIS NOUVEAU	FRANCE	86/11/17	2	0.26	0.10	WMRE
BEAUJOLAIS NOUVEAU	FRANCE	86/11/17	2	0.23	0.14	WMRE
BEAUJOLAIS PRIMEUR	FRANCE	86/11/17	2	0.26	0.13	WMRE
BEAUJOLAIS PRIMEUR	FRANCE	86/11/17	2	0.28	0.10	WMRE
BEAUJOLAIS NOUVEAU	FRANCE	86/11/17	2	0.16	0.10	WMRE
BEAUJOLAIS NOUVEAU	FRANCE	86/11/17	2	0.09	0.02	WMRE

* Less than detection limit
See Table 1 for explanation of reporting agency abbreviations

Table 26. (cont'd)
Chernobyl Reactor Accident Monitoring
Radionuclide Analyses of Imported Foodstuffs, Non-BRMD
(Bequerels per kilogram)

Sample Name	Country	Sample Date	I-131	Cs-137	Cs-134	Reporting Agency
GREEN BEANS	HOLLAND	86/05/21	2	2		RPS
BELGIUM ENDIVE	HOLLAND	86/05/21	2	5.4		RPS
CORN SALAD	HOLLAND	86/05/21	50	2		RPS
PEPPERS	HOLLAND	86/05/27	1.2	5.8		RPS
PEPPERS	HOLLAND	86/05/27	2	2		RPS
PEPPERS	HOLLAND	86/05/27	2	7.4		RPS
PEPPERS	HOLLAND	86/05/27	1.4	2		RPS
RED PEPPERS	HOLLAND	86/05/27	2	4.2		RPS
RED PEPPERS	HOLLAND	86/05/14	9.0			SREG
RED PEPPERS	HOLLAND	86/05/17	15			SREG
RED PEPPERS	HOLLAND	86/05/18	2.5			SREG
RED PEPPERS	HOLLAND	86/05/25	13			SREG
RED PEPPERS	HOLLAND	86/05/25	9.3			SREG
RED LETTUCE	ITALY	86/05/20	2	2		RPS
CURLY ENDIVE	ITALY	86/05/20	2	2		RPS
FENNEL	ITALY	86/05/20	2	4.8		RPS
RED LETTUCE	ITALY	86/05/27	13	24		RPS
CURLY ENDIVE	ITALY	86/05/27	2	2		RPS
FENNEL	ITALY	86/05/27	2.4	2		RPS
LETTUCE	ITALY	86/05/27	3.7	7.5		RPS
RADICCHIO	ITALY	86/06/02	2	13		RPS
FENNEL	ITALY	86/06/02	1.3	2		RPS
RADDICCHIO ROSSO	ITALY	86/05/14	6.0			SREG
RADDICCHIO ROSSO	ITALY	86/05/18	3.9			SREG
BROCCOLI	U.S.A.	86/05/15	3.5	2		RPS
LETTUCE	U.S.A.	86/05/15	2	2		RPS
CAULIFLOWER	U.S.A.	86/05/16	2	2		RPS
ASPARAGUS	U.S.A.	86/05/15	2.1	2		RPS
ROMAINE LETTUCE	U.S.A.	86/05/21	7.1	2		RPS
SPINACH	U.S.A.	86/05/21	2	2		RPS

2 Less than detection limit
See Table 1 for explanation of reporting agency abbreviations

Table 27. Offsite Monitoring of Nuclear Reactor Environs --
Tritium in Air-Water Vapour 1986

(Becquerels per cubic metre air)

Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.
BRUCE													
2 - 3.5 km ESE	.86	*	*	1.33	1.17	4.97	2.84	2.93	2.36	7.84	4.59	3.10	2.67
3 - 4.0 km S	.99	1.05	.77	2.95	.53	3.05	3.28	*	1.69	2.44	2.16	.29	1.60
4 - 8.0 km SE	5.24	.61	.33	1.88	.16	.87	1.94	*	.23	.63	.46	.20	1.05
5 - 8.0 km ESE	.44	.53	.40	.81	.17	.62	.42	.54	.28	1.96	.28	.48	.58
6 - 40.0 km SE	.17	.07	.12	.20	*	.17	.19	.15	.11	.30	.98	.25	.23
DARLINGTON													
1 - 8.0 km W	-	.13	.53	.11	.47	.17	.24	.22	.11	.15	.54	.59	.30
2 - 6.5 km NW	-	.11	.14	.12	.26	.13	*	.31	.11	.05	.52	.61	.22
3 - 5.8 km NE	-	.29	.30	.04	.15	*	.11	.20	.11	.20	.32	.34	.19
4 - 5.3 km ENE	-	1.04	.13	.10	.10	*	*	.17	*	.15	.23	.26	.21
5 - 2.4 km NNW	-	-	-	-	-	-	-	-	.11	.17	.26	.45	.25
6 - 2.0 km N	-	-	-	-	-	-	-	-	.12	.29	.25	.47	.28
7 - 2.6 km NNE	-	-	-	-	-	-	-	-	*	.12	.43	.59	.30
GENTILLY													
1 - 11.5 km NNE	1.03	1.29	.06	.22	*	1.83	.13	.35	*	.11	.26	.62	.50
2 - 6.5 km NNE	.22	.23	.13	*	.12	.55	.14	.13	.22	.18	.25	.19	.20
3 - 5.0 km NNW	.09	.22	.09	-	*	.12	.18	.16	*	*	.24	.12	.12
4 - 7.0 km SW	.52	.32	.18	.14	*	*	*	*	.11	.05	.20	.18	.16
5 - 6.5 km ENE	.37	.59	.28	-	*	.39	.18	.25	.14	.08	.43	.27	.27
6 - 13.5 km NE	*	.13	*	*	*	.55	*	.13	*	.06	.15	.16	.12
PT. LEPREAU													
1 - 2.6 km NNW	.94	.16	*	.39	.11	.10	.12	.26	*	.07	.22	.28	.23
2 - 4.8 km NNE	.50	.38	.83	.22	.32	.72	.29	.42	.11	.54	.10	.16	.38
3 - 9.7 km NW	.24	*	*	*	*	*	*	*	*	*	*	.07	.07
4 - 19.3 km NNE	*	*	*	*	*	.11	*	*	*	.07	.04	.38	.08
5 - 29.0 km NE	*	.06	.09	.11	.12	*	*	.11	*	*	.06	.14	.07
6 - 131.0 km N	.29	.22	*	*	*	*	*	*	*	*	.05	.31	.11
7 - 97.0 km SE	*	.06	*	*	*	*	*	*	*	*	*	.11	.05
8 - 105.0 km ESE	*	.09	*	.04	*	*	*	*	.11	*	.07	*	.06

Table 27. (cont'd)

(Becquerels per cubic metre air)

Station	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.
PICKERING													
1 - 1.0 km NW	8.10	-	3.10	5.18	-	1.46	2.57	2.40	2.51	1.17	1.19	2.78	3.05
2 - 1.5 km NW	2.67	.22	6.39	1.93	6.37	4.16	1.70	2.62	.54	6.10	2.45	2.32	3.12
3 - 2.0 km NNW	.65	.09	3.57	1.62	2.12	1.76	1.74	1.92	1.70	1.49	4.92	1.47	1.92
4 - 1.8 km NNE	3.01	.33	32.40	11.60	5.94	7.73	2.74	4.23	3.94	4.69	5.39	1.27	6.94
5 - 1.0 km E	15.50	4.82	34.80	13.30	10.90	7.57	3.00	6.00	11.80	13.10	15.10	5.59	11.79
7 - 33.0 km SW	.80	.30	.13	.16	.29	*	.20	.20	.14	.20	.12	.12	.17

* Less than detection limit of: 0.1 Bq m⁻³ May-Sept.: 0.04 Bq m⁻³ Oct.-Apr.
 - No sample

Table 28. Offsite Monitoring of Nuclear Reactor Environs--
Strontium-90 in Untreated Water 1986

(Millibecquerels per litre)

Station	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Annual Average
Winnipeg River					
1) Pinawa	19	4	12	16	13
2) Lac du Bonnet	19	*	2	*	5
3) Great Falls	21	9	20	20	18
Lake Huron					
1) Port Elgin	10	9	8	7	8
2) Kincardine	11	*	10	8	7
Lake Ontario					
1) Toronto	*	8	13	10	8
2) Ajax	*	16	*	7	8
3) Oshawa	*	13	*	*	5
Ottawa River					
1) Rolphton	12	14	12	12	12
2) Deep River	13	13	11	11	12
3) Petawawa	12	8	12	10	11
4) Pembroke	12	11	12	13	12
5) Ottawa	12	5	26	13	14
St. Lawrence River					
1) Becancour	2	14	*	*	4
2) Grondines	5	*	2	3	3
3) St. Romuald	*	*	*	10	4

* Less than the detection limit of 1 mBq L⁻¹

Table 29. Offsite Monitoring of Nuclear Reactor Environs--
Cesium-137 in Untreated Water 1986

(Millibecquerels per litre)

Station	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	Annual Average
Winnipeg River					
1) Pinawa	*	1	*	*	1
2) Lac du Bonnet	*	*	*	*	*
3) Great Falls	1	3	*	*	1
Lake Huron					
1) Port Elgin	2	1	*	*	*
2) Kincardine	*	*	*	1	*
Lake Ontario					
1) Toronto	*	1	*	*	*
2) Ajax	*	*	*	*	*
3) Oshawa	*	*	*	*	*
Ottawa River					
1) Rolphton	4	4	2	*	3
2) Deep River	4	3	2	*	2
3) Petawawa	6	3	7	4	5
4) Pembroke	4	2	6	4	4
5) Ottawa	5	4	3	*	3
St. Lawrence River					
1) Becancour	1	2	*	1	1
2) Grondines	*	*	*	*	*
3) St. Romuald	*	2	*	*	*

* Less than the detection limit of 1 mBq L⁻¹

Table 30. External Radiation Dose Measurements
at Environmental Stations in 1986

Station	Dose Rate ($\mu\text{Gy hr}^{-1}$)				Cumulative Dose (mGy)
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	
Calgary, Alta.	0.05 $\pm$ 0.01	0.06 $\pm$ 0.01	0.05 $\pm$ 0.02	0.06 $\pm$ 0.02	0.48 $\pm$ 0.06
Churchill, Man.	0.05 $\pm$ 0.01	0.05 $\pm$ 0.01	0.05 $\pm$ 0.02	0.06 $\pm$ 0.02	0.46 $\pm$ 0.06
Coral Harbour N.W.T.	-	0.05 $\pm$ 0.02	0.06 $\pm$ 0.02	0.05 $\pm$ 0.01	0.46 $\pm$ 0.08
Digby, N.S.	0.06 $\pm$ 0.01	0.08 $\pm$ 0.02	0.10 $\pm$ 0.02	0.07 $\pm$ 0.01	0.68 $\pm$ 0.06
Edmonton, Alta.	0.09 $\pm$ 0.02	0.09 $\pm$ 0.02	0.09 $\pm$ 0.02	0.09 $\pm$ 0.02	0.79 $\pm$ 0.08
Fredericton, N.B.	0.07 $\pm$ 0.01	0.07 $\pm$ 0.01	0.09 $\pm$ 0.02	0.08 $\pm$ 0.02	0.68 $\pm$ 0.06
Goose Bay, Nfld.	-	0.07 $\pm$ 0.02	0.07 $\pm$ 0.02	0.08 $\pm$ 0.02	0.64 $\pm$ 0.09
C.F.B. Greenwood N.S.	0.07 $\pm$ 0.01	0.06 $\pm$ 0.02	0.08 $\pm$ 0.02	0.07 $\pm$ 0.02	0.61 $\pm$ 0.07
Halifax, N.S.	0.06 $\pm$ 0.01	0.08 $\pm$ 0.01	0.09 $\pm$ 0.02	0.07 $\pm$ 0.02	0.66 $\pm$ 0.06
Hay River, N.W.T.	-	0.07 $\pm$ 0.01	0.09 $\pm$ 0.02	0.08 $\pm$ 0.02	0.70 $\pm$ 0.08
Inuvik, N.W.T.	0.05 $\pm$ 0.02	0.07 $\pm$ 0.02	0.09 $\pm$ 0.03	0.08 $\pm$ 0.01	0.64 $\pm$ 0.08
Montreal, Que.	0.05 $\pm$ 0.02	0.06 $\pm$ 0.03	0.07 $\pm$ 0.02	0.06 $\pm$ 0.01	0.53 $\pm$ 0.08
Moosonee, Ont.	-	0.05 $\pm$ 0.01	0.05 $\pm$ 0.02	0.05 $\pm$ 0.02	0.44 $\pm$ 0.08
Ottawa, Ont.	0.07 $\pm$ 0.01	0.08 $\pm$ 0.01	0.09 $\pm$ 0.02	0.07 $\pm$ 0.02	0.68 $\pm$ 0.06
Quebec City, Que.	0.06 $\pm$ 0.01	0.06 $\pm$ 0.02	0.10 $\pm$ 0.03	0.06 $\pm$ 0.02	0.61 $\pm$ 0.08
Regina, Sask.	0.07 $\pm$ 0.01	0.08 $\pm$ 0.01	0.09 $\pm$ 0.02	0.09 $\pm$ 0.03	0.72 $\pm$ 0.07
Resolute, N.W.T.	-	0.05 $\pm$ 0.01	0.06 $\pm$ 0.03	0.05 $\pm$ 0.01	0.46 $\pm$ 0.08
Saskatoon, Sask.	0.07 $\pm$ 0.02	0.08 $\pm$ 0.01	0.08 $\pm$ 0.02	0.08 $\pm$ 0.02	0.68 $\pm$ 0.07
Sault Ste. Marie Ont.	-	0.06 $\pm$ 0.02	0.07 $\pm$ 0.02	0.05 $\pm$ 0.02	0.53 $\pm$ 0.09
St. John's, Nfld.	0.07 $\pm$ 0.02	0.09 $\pm$ 0.01	0.08 $\pm$ 0.02	0.08 $\pm$ 0.02	0.70 $\pm$ 0.07
Thunder Bay, Ont.	0.05 $\pm$ 0.02	0.06 $\pm$ 0.01	0.07 $\pm$ 0.02	0.07 $\pm$ 0.01	0.55 $\pm$ 0.05

Table 30. (cont'd)

Station	Dose Rate ($\mu\text{Gy hr}^{-1}$)				Cumulative Dose (mGy)
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	
Toronto, Ont.	0.06 ± 0.01	0.05 ± 0.02	0.07 ± 0.02	0.07 ± 0.02	0.55 ± 0.07
Vancouver, B.C.	0.06 ± 0.01	0.06 ± 0.02	0.07 ± 0.02	0.06 ± 0.02	0.55 ± 0.07
Whitehorse, Y.T.	0.09 ± 0.02	0.06 ± 0.02	0.10 ± 0.03	0.06 ± 0.01	0.68 ± 0.08
Windsor, Ont.	0.07 ± 0.01	0.07 ± 0.01	0.08 ± 0.02	0.14 ± 0.02	0.64 ± 0.06
Winnipeg, Man.	0.07 ± 0.01	0.08 ± 0.01	0.08 ± 0.03	0.07 ± 0.02	0.66 ± 0.07
Yellowknife, N.W.T.	0.06 ± 0.01	0.08 ± 0.02	0.11 ± 0.03	0.10 ± 0.02	0.77 ± 0.08

- No sample

Table 31. External Radiation Dose Measurements
in the Vicinity of Nuclear Reactors 1986

Station	Microgray per hour				Cumulative Dose (mGy)
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	
<u>BRUCE</u>					
2	0.06±0.01	0.06±0.02	0.06±0.03	0.07±0.02	0.55±0.08
3	0.06±0.01	0.08±0.01	0.06±0.02	0.06±0.02	0.57±0.06
4	0.07±0.01	0.09±0.02	0.07±0.02	0.07±0.02	0.66±0.07
5	0.08±0.01	0.06±0.02	0.08±0.03	0.08±0.02	0.66±0.08
6	0.10±0.02	0.10±0.02	0.17±0.03	0.08±0.02	0.99±0.09
<u>PICKERING</u>					
1	-	0.06±0.02	-	0.07±0.01	0.59±0.07
2	0.06±0.02	0.09±0.02	-	0.07±0.01	0.64±0.08
3	0.04±0.02	0.07±0.02	-	0.06±0.02	0.48±0.09
4	0.07±0.02	0.07±0.02	0.07±0.02	0.05±0.02	0.57±0.08
5	0.06±0.01	0.07±0.01	-	0.06±0.01	0.55±0.05
7	0.06±0.01	0.05±0.02	0.07±0.02	0.07±0.02	0.55±0.07
8	-	0.07±0.02	-	0.04±0.02	0.46±0.10
<u>GENTILLY</u>					
1	0.06±0.01	0.06±0.01	0.12±0.03	0.06±0.01	0.66±0.06
4	0.04±0.02	0.06±0.02	0.06±0.02	0.05±0.02	0.46±0.08
<u>POINT LEPREAU</u>					
1	0.07±0.01	0.07±0.01	0.08±0.02	0.07±0.02	0.64±0.06
2	0.07±0.01	0.08±0.02	0.08±0.03	0.08±0.02	0.68±0.07
3	0.06±0.01	0.07±0.02	0.05±0.02	0.05±0.02	0.50±0.07
4	0.06±0.01	0.08±0.02	0.08±0.02	0.07±0.02	0.64±0.07
5	0.10±0.01	0.11±0.02	0.10±0.03	0.07±0.01	0.64±0.06
6	0.06±0.01	0.07±0.01	0.09±0.02	0.08±0.02	0.66±0.06
7	0.04±0.01	0.08±0.02	0.10±0.02	0.07±0.01	0.64±0.06
8	0.05±0.01	0.05±0.02	0.08±0.02	0.07±0.02	0.55±0.07

Table 31.(cont'd)

Station	Microgray per hour				Cumulative Dose (mGy)
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter	
DARLINGTON					
1	0.07±0.01	0.06±0.01	0.06±0.02	0.07±0.02	0.57±0.06
2	0.05±0.01	0.06±0.01	0.05±0.02	0.09±0.02	0.55±0.03
3	0.08±0.02	0.07±0.02	0.07±0.02	0.06±0.03	0.61±0.09
4	0.05±0.02	0.06±0.02	0.06±0.02	0.07±0.02	0.53±0.08
5	-	-	-	0.08±0.02	0.70±0.08
6	-	-	-	0.07±0.02	0.61±0.08
7	-	-	-	0.05±0.03	0.44±0.12

- No sample

Table 32. Offsite Monitoring of Nuclear Reactor Environs--
Gamma Emitting Radionuclides in Air,
Pickering Nuclear Generating Station, 1986

(Microbecquerels per cubic metre)

Isotope	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
Be-7	924	1270	1390	1430	1620	1690	1420	1670	2340	1850	3010	1590
K-40	6.1	21	*	15	25	*	13	*	10	6.0	14	*
Ru-103	*	*	*	*	520	140	2.3	*	*	*	*	*
Ru-106	*	*	*	*	200	80	*	*	*	*	*	*
I-131	*	*	*	*	*	*	*	*	*	*	*	*
Cs-134	*	*	*	*	260	51	*	*	*	*	*	*
Cs-137	*	*	*	*	490	95	*	*	*	*	*	*

* Less than detection limit
Detection limits: K-40 - 6 $\mu\text{Bq m}^{-3}$
Ru-103 - 2 $\mu\text{Bq m}^{-3}$
Ru-106 - 23 $\mu\text{Bq m}^{-3}$
Cs-134 - 3 $\mu\text{Bq m}^{-3}$
Cs-137 - 3 $\mu\text{Bq m}^{-3}$

Table 33. Radium-226 Levels in Drinking Water 1986
(Millibecquerels per litre)

	First Quarter			Second Quarter			Third Quarter			Fourth Quarter		
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
<u>Ontario</u>												
Elliot Lake Treated	13.0	16.3	16.8	21.0	23.1	13.7						
Elliot Lake Untreated	15.0	18.7	-	-	-	-	-	-	-	-	-	-
Ottawa	*	*	-	-	-	-	-	-	-	-	-	-
Port Hope	*	*	*	*	*	*	*	*	*	*	*	*
<u>Saskatchewan</u>												
Regina	*	*	*	*	*	*	5.29	*	*	*	*	*

* Less than the detection limit of 5 mBq L⁻¹
- No Sample

Table 34. Uranium Levels in Drinking Water 1986
(Micrograms per litre)

	First Quarter			Second Quarter			Third Quarter			Fourth Quarter		
	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.
<u>Ontario</u>												
Elliot Lake Treated	←-----0.8-----→			1.1	1.1	1.2	←-----0.8-----→			←-----1.6-----→		
Port Hope	←-----0.2-----→			←-----0.6-----→			←-----1.0-----→			←-----1.4-----→		
<u>Saskatchewan</u>												
Regina	-	-	7.5	2.2	1.9	3.3	3.4	5.5	5.6	3.4	3.8	3.8

Detection limit 0.1 µg/L
- No Sample

Table 35. Performance in Laboratory Intercomparisons.

<u>Medium</u>	<u>Analysis</u>	<u>ERHD Value*</u>	<u>Known Value**</u>
Air Filter	gross α	0.76	0.81 ± 0.55
	gross β	2.42	2.44 ± 0.55
Air Filter	gross α	0.53	0.55 ± 0.55
	gross β	1.92	1.73 ± 0.55
Water	gross α	0.26	0.11 ± 0.55
	gross β	0.25	0.26 ± 0.55
Water	gross α	0.76	0.55 ± 0.55
	gross β	0.26	0.30 ± 0.55
Water	gross α	0.30	0.30 ± 0.55
	gross β	0.48	0.55 ± 0.55
Water	gross α	0.22	0.22 ± 0.55
	gross β	0.58	0.67 ± 0.55
Water	gross α	0.59	0.55 ± 0.55
	gross β	0.30	0.30 ± 0.55
Water	tritium	196	193 ± 58
	tritium	116	116 ± 40
	tritium	201	221 ± 66
Water	Sr-89	1.28	1.15 ± 0.55
	Sr-90	0.46	0.55 ± 0.17
Water	Sr-89	0.20	0.19 ± 0.55
	Sr-90	0.16	0.19 ± 0.17
Water	Ra-226	0.17	0.15 ± 0.07
	Ra-228	0.51	0.46 ± 0.21
Water	Ra-226	0.32	0.32 ± 0.14
	Ra-228	0.75	0.62 ± 0.28
Water	Uranium	0.42	0.33 ± 0.66
Water	Uranium	0.15	0.15 ± 0.66
Water	Cr-51 (gamma)	1.71	1.41 ± 0.55
	Co-60 (gamma)	0.75	0.67 ± 0.55
	Zn-63 (gamma)	1.71	1.48 ± 0.55
	Ru-106 (gamma)	00.00	0.00
	Cs-134 (gamma)	1.13	1.11 ± 0.55
	Cs-137 (gamma)	0.94	0.81 ± 0.55

Table 35. (cont'd)

<u>Medium</u>	<u>Analysis</u>	<u>ERHD Value*</u>	<u>Known Value**</u>
Water	Cr-51 (gamma)	LT 0.26	00.00 $\pm$ 0.55
	Co-60 (gamma)	4.06	2.44 $\pm$ 0.55
	Zn-63 (gamma)	5.22	3.18 $\pm$ 0.55
	Ru-106 (gamma)	2.71	1.85 $\pm$ 0.55
	Cs-134 (gamma)	2.80	1.81 $\pm$ 0.55
	Cs-137 (gamma)	0.38	0.37 $\pm$ 0.55
Water	I-131	1.41	1.67 $\pm$ 0.67
Milk	Sr-89	LT 0.04	0.00
	Sr-90	0.53	0.59 $\pm$ 0.17
	I-131	1.64	1.52 $\pm$ 0.67
	Cs-137	1.38	1.15 $\pm$ 0.55
	K	1567	1600 $\pm$ 80
Air Sample	Rn-222	1100 $\pm$ 48	1140
Air Sample	Rn-222	2510 $\pm$ 93	2610
Field site #1	External gamma (TLD)	0.286 $\pm$ 0.027	0.297
Field site #2	External gamma (TLD)	0.087 $\pm$ 0.015	0.104
Laboratory	External gamma (TLD)	0.157 $\pm$ 0.02	0.172

* All units are Bq L⁻¹ except air filters (Bq per filter), Rn-222 (Bq m⁻³), potassium (mg L⁻¹) and external gamma (m Gy).

** Control limits are three standard deviations.

TABLE 36

Radiation Doses in Microsieverts for Exposure during May-June 1986

CITY	INHALATION	GROUND DEPOSITION	MILK	OTHER FOODS	TOTAL
Vancouver	0.04	0.53	0.53	0.53	1.63
Edmonton	0.05	0.42	0.32	0.32	1.11
Calgary	0.05	0.12	0.05	0.05	0.27
Saskatoon	0.03	0.19	0.11	0.11	0.44
Regina	0.03	0.40	0.26	0.26	0.95
Winnipeg	0.05	0.19	0.14	0.14	0.52
Thunder Bay	0.03	0.14	0.05	0.05	0.27
Sault Ste. Marie	0.03	0.18	0.10	0.10	0.41
Windsor	0.02	0.12	0.06	0.06	0.26
Toronto	0.02	0.09	0.03	0.03	0.17
Ottawa	0.03	0.31	0.12	0.12	0.58
Montreal	0.03	0.28	0.08	0.08	0.47
Quebec	0.03	0.38	0.13	0.13	0.67
Fredericton	0.04	0.14	0.09	0.09	0.36
Halifax	0.03	0.14	0.12	0.12	0.41
St. John's	0.02	0.12	0.07	0.07	0.28
Whitehorse	0.02	0.14	0.32*	0.32*	0.80
Yellowknife	0.02	0.19	0.32*	0.32*	0.85
Goose Bay	0.02	0.26	0.07**	0.07**	0.42
NATIONAL AVERAGE	0.03	0.23	0.16	0.16	0.58

* Assumed equal to that of Edmonton

** Assumed equal to that of St. John's

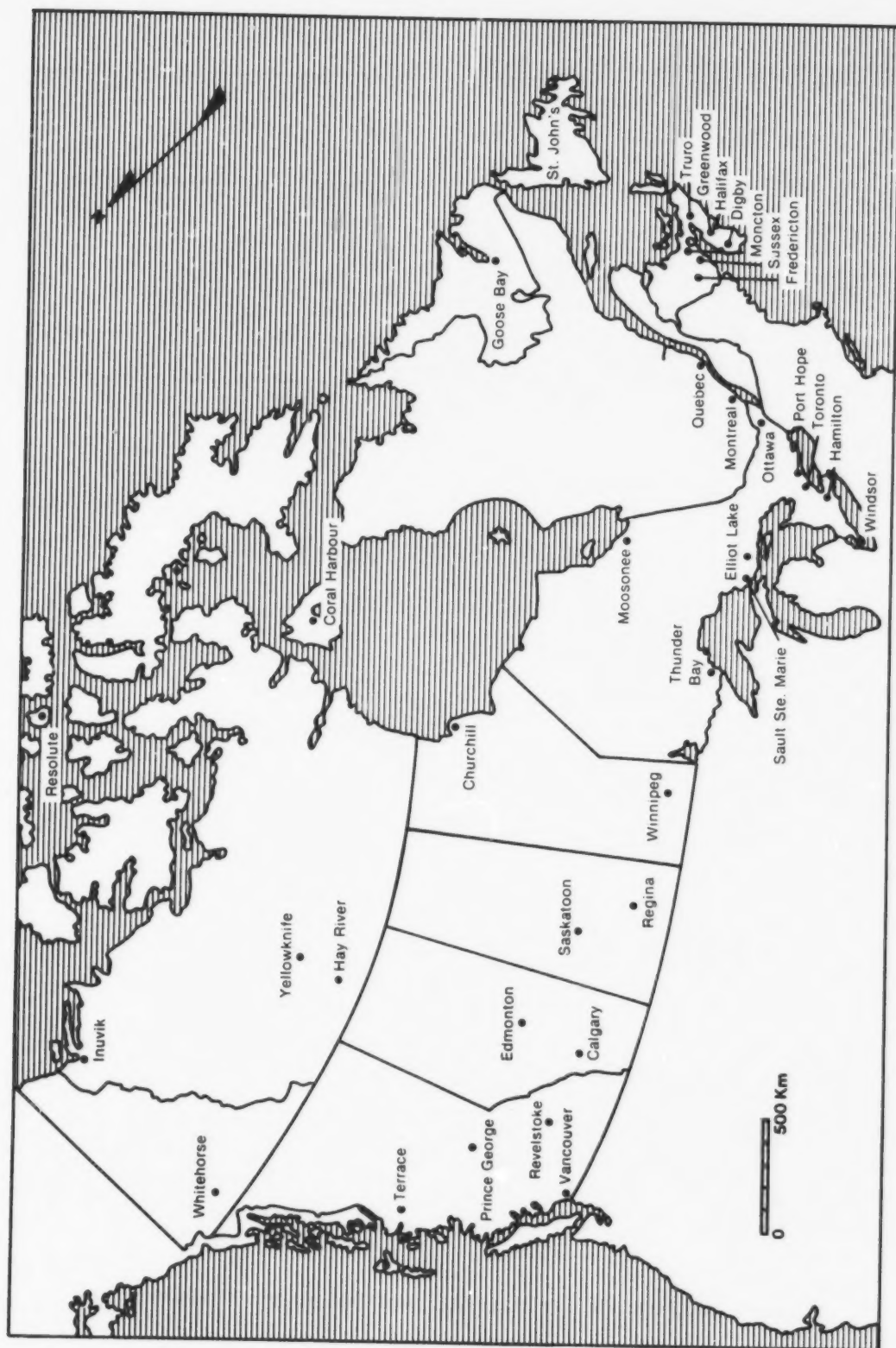


Figure 1. Canadian Sampling Station Network

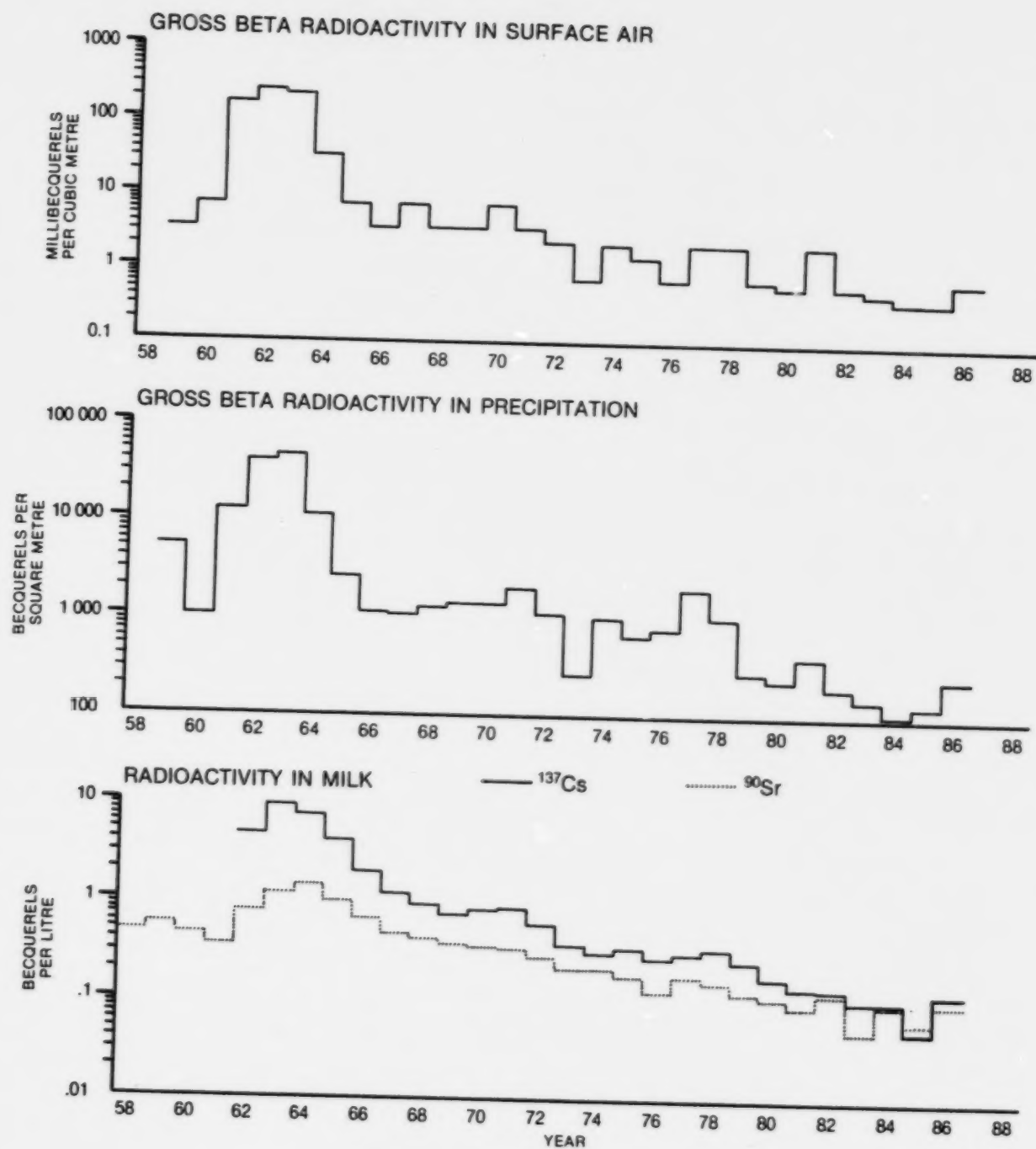


Figure 2. Fallout Trends, National Averages, 1958-1986

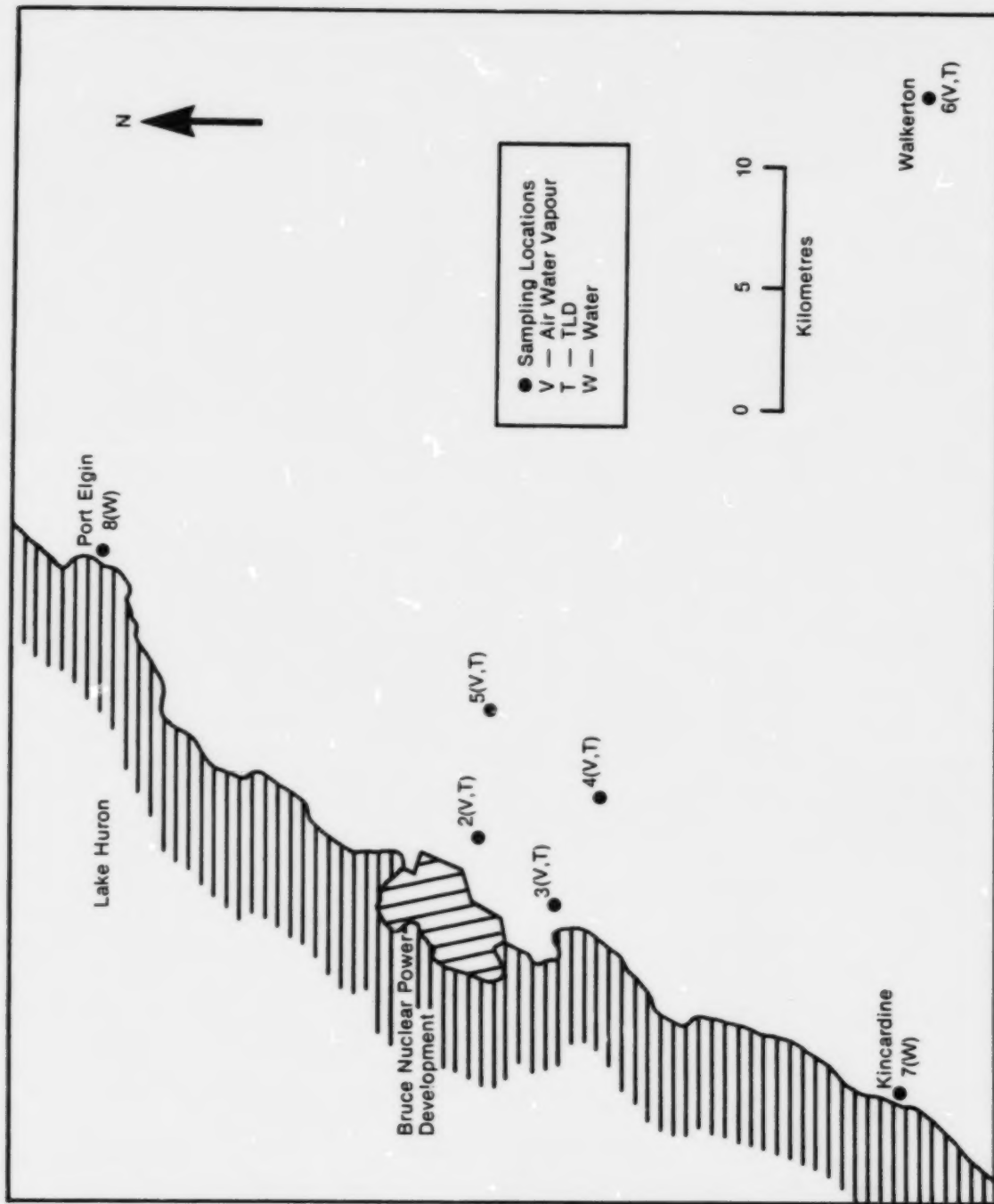


Figure 3. Sampling Locations in the Vicinity of the Bruce Nuclear Power Development

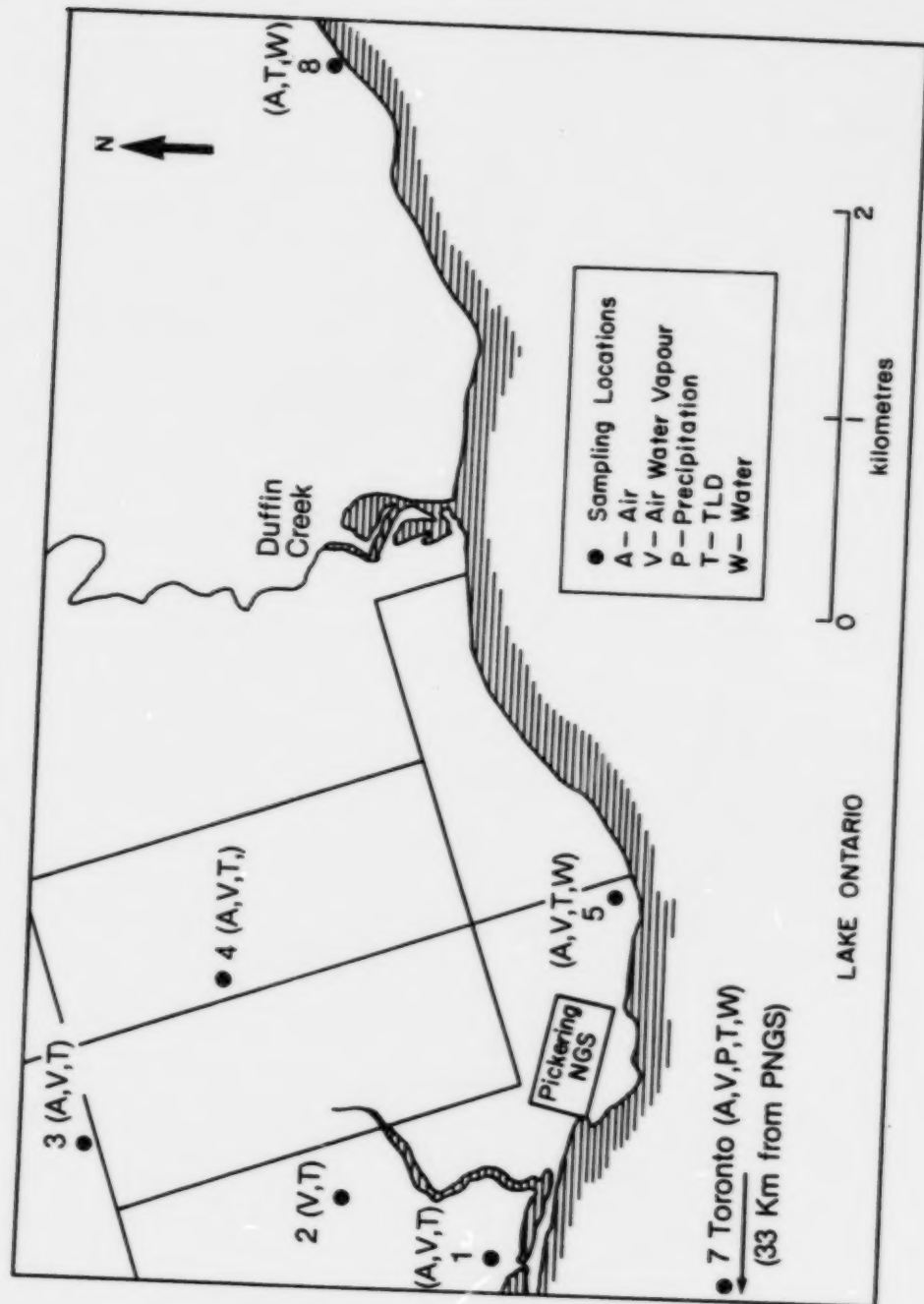


Figure 4. Sampling Locations in the Vicinity of the Pickering Nuclear Generating Station

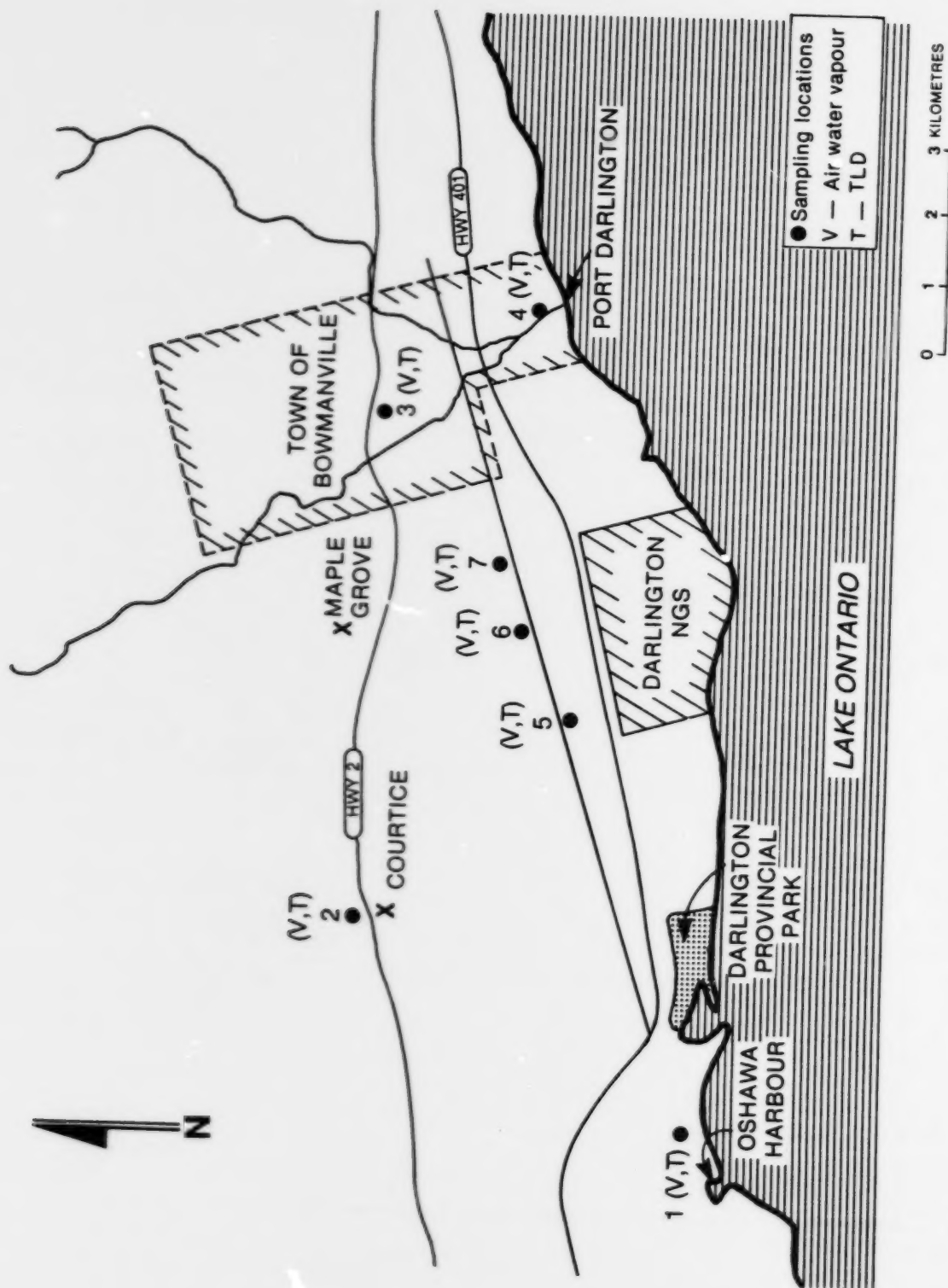


Figure 5. Sampling Locations in the Vicinity of the Darlington Nuclear Generating Station

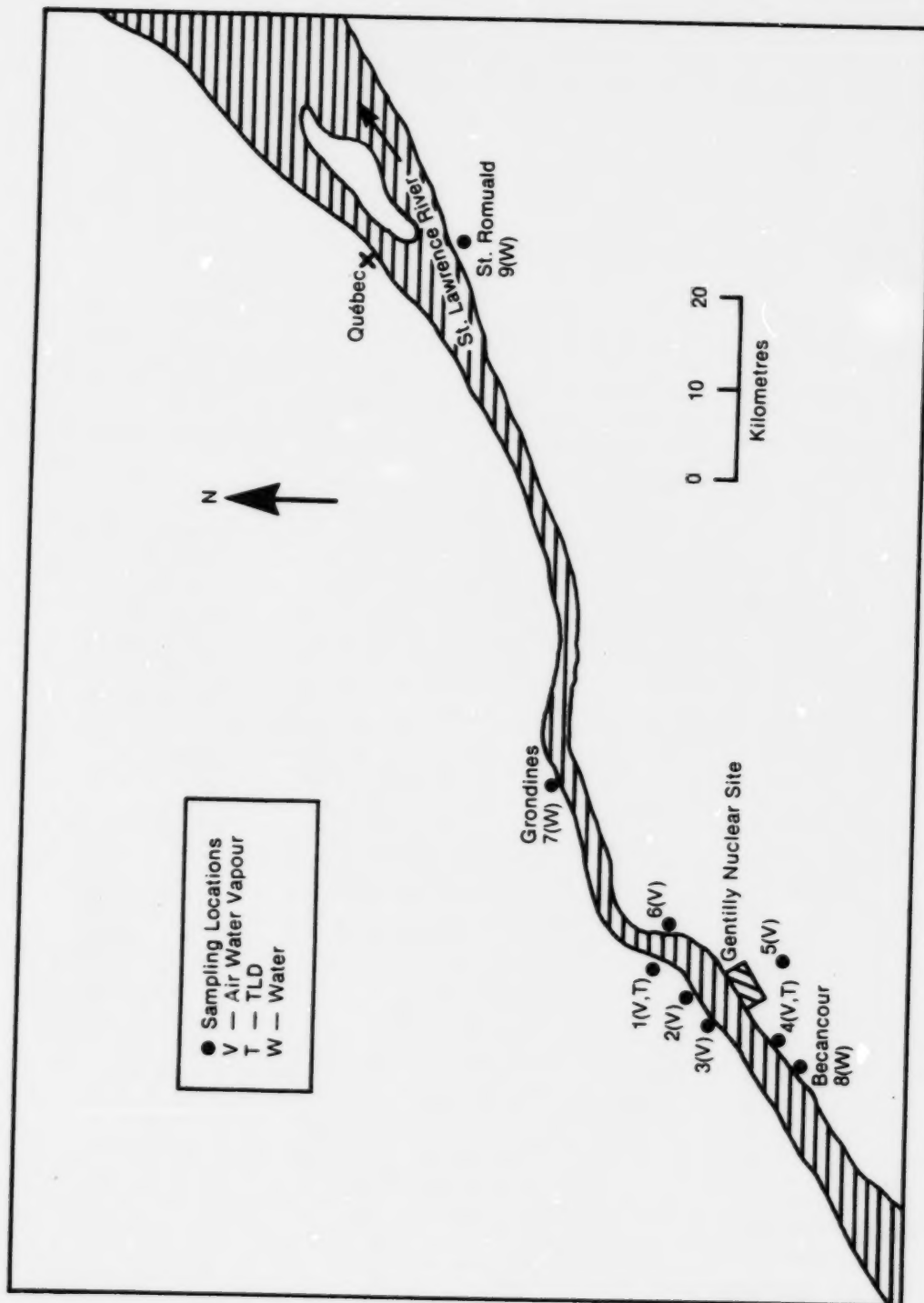


Figure 6. Sampling Locations in the Vicinity of the Gentilly Nuclear Site

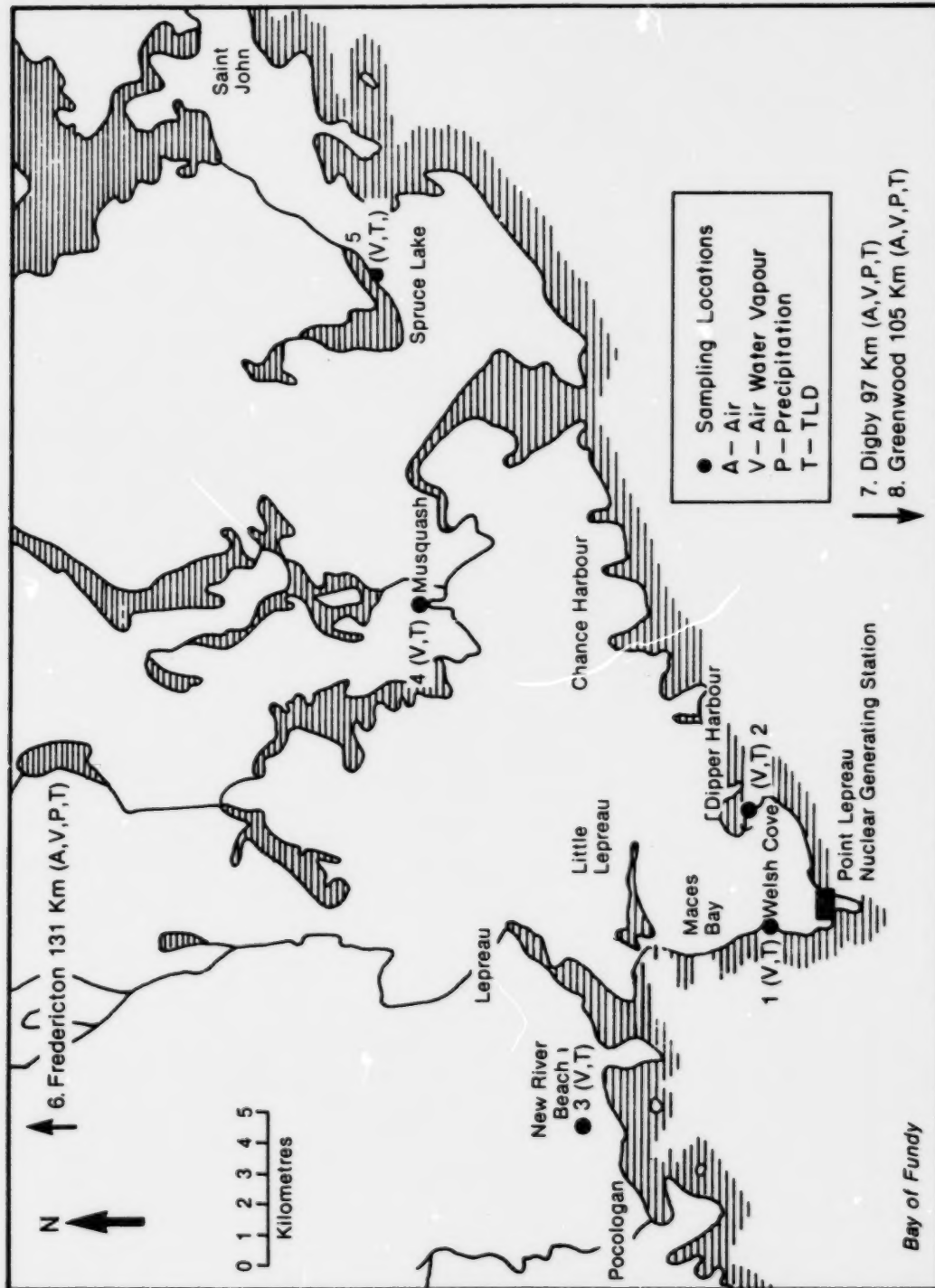


Figure 7. Sampling Locations in the Vicinity of the Point Lepreau Nuclear Generating Station

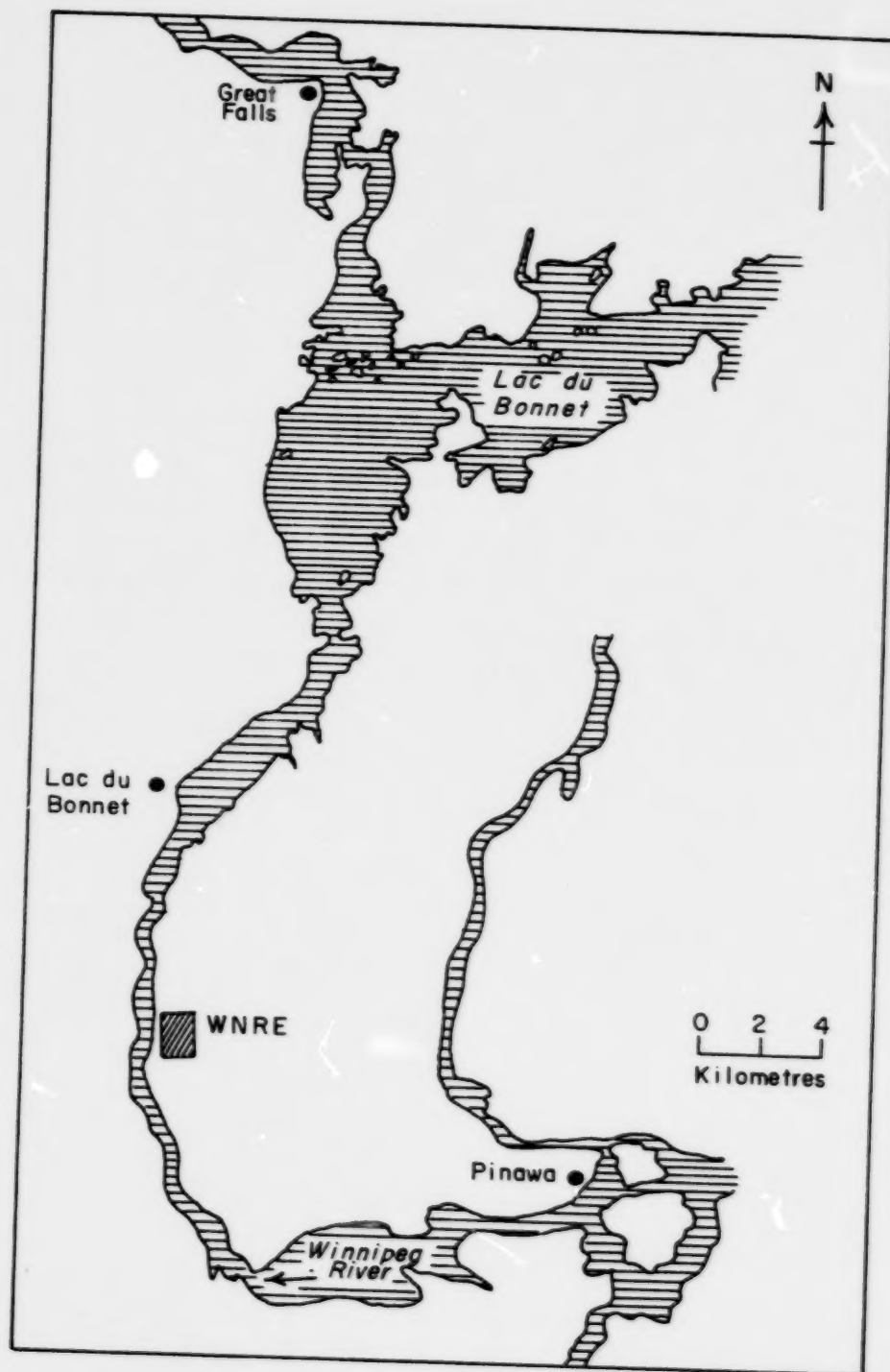


Figure 8. Sampling Locations on the Winnipeg River - Drinking Water

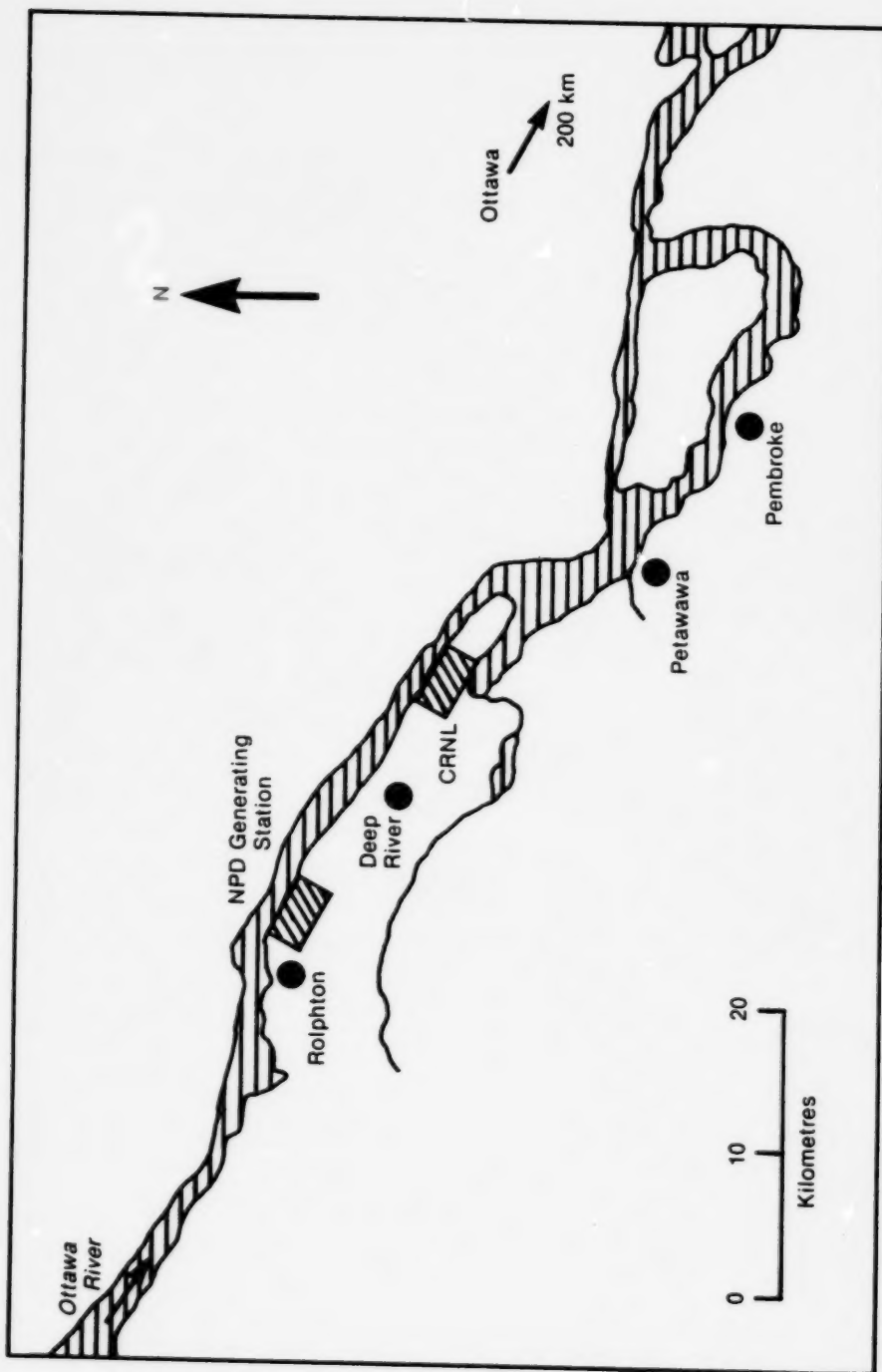


Figure 9. Sampling Locations on the Ottawa River - Drinking Water